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Needs Survey (1980): Cost Estimates for Construction of Publicly-Owned Wastewater Treatment Facilities

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1980 Needs Survey

Cost Estimates for Construction of Publicly-Owned Wastewater Treatment Facilities

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This Report was prepared under the direction of:

James A. Chamblee, Chief
Priority and Needs Assessment Branch (WH-595)
Office of Water Program Operations
U.S. Environmental Protection Agency
Washington, D.C. 20460

(202) 426-4443

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This report has a detailed estimate of the cost of construction of all needed publicly-owned treatment works in all of the States, to meet the 1983 goals of the Act.

Also included in this report are estimates of the total current expenditures for municipal waste treatment in the Nation, as well as projections of those costs to the year 2000.

The cost estimates presented in this Survey may serve as a basis for Congressional allotment of funds in accordance with the provisions of the Act and is submitted in compliance with the provisions of the Clean Water Act, sections 205(g) and 516(b)(1).

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1980 NEEDS SURVEY

COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES

February 10, 1981

TABLE OF CONTENTS

		PAGES
I.	Introduction	1
II.	Explanation of the Survey	2-4
III.	Results of the Survey	4-13
	Table A - 1980 Needs Survey Summary Costs	5
	Table B - Year 2000 and Backlog Needs	7
	Table C - Urban/Rural Needs	9
	Table D - Multiple-Purpose Needs Estimates	12
	Table E - Types of Multiple-Purpose Treatment Facilities	13
IV.	Comparison with the 1978 Survey	14-15
	Table F - Comparison of 1980 Survey with 1978 Survey and Construction Grant Awards in 1978 and 1979	14
V.	Quality of Facility Estimates, Categories I-V	15-17
VI.	Category VI. Treatment and/or Control of Stormwater	18
	Table G - Comparison of 1980 Survey with 1978 Survey Year 2000 Category VI. Stormwater Control Needs	18
VII.	Comprehensive Domestic Wastewater Treatment Needs	19-27
	Table H - Aggregate Annual Expenditures	20
	Table I - Total 1981-2000 Needs	21-22
	Figure 1 - Comprehensive Domestic Wastewater Expenditures Required, 1981-2000	24
	Table J - Sources of Information	26
VIII.	Summary and Conclusions	28-29
APPENDIX A - Conduct of the Survey		30-39
	I. Categories I-IV	30-34
	II. Category V	34-38
	III. Category VI	38-39
APPENDIX B - Reasons for Independent State Estimates		40
APPENDIX C - Summary Tables		41-43
	Tables 1-47	44-90
APPENDIX D - List of SMSA Sketch Profiles and Inner City Reports		91-93

COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES

1980 NEEDS SURVEY

I. INTRODUCTION

This report is submitted in compliance with the provisions of the Clean Water Act, sections 205(a) and 516(b)(1). Included in this report are a detailed estimate of the cost of construction of all needed publicly-owned treatment works in all of the States and the cost of construction of all needed publicly-owned treatment works in each of the States, to meet the 1983 goals of the Act. The cost estimates presented in this Survey may serve as a basis for Congressional allotment of funds in accordance with the provisions of the Act.

Also included in this report are estimates of the total current expenditures for municipal waste treatment in the Nation, as well as projections of those costs to the year 2000.

This is the fifth Needs Survey conducted since the enactment of PL 92-500. Previous Surveys were conducted in 1973, 1974, 1976, and 1978. The 1980 Survey had five initial goals aimed at improvement of the Needs estimation process:

1. To secure estimates which are comparable nationwide,

2. To improve the overall quality of the estimates,

3. To develop a detailed information base to assist in program planning and management,

4. To update a national inventory of wastewater treatment facilities and combined sewer areas, and

5. Provide a basis for the allocation of construction grant funds among the States.

EPA, in a joint effort with an advisory group consisting of State and Regional representatives, formulated the approach used in the 1980 Needs Survey. The approach selected called for an active role by EPA, with State participation in varying degrees, State-by-State, depending on resource priorities. This permitted the use of a single nationwide methodology, with uniformly applied guidelines. Provisions were made in the guidelines for local cost variations due to local conditions affecting construction costs.

II. EXPLANATION OF THE SURVEY

A. Cost Categories

The 1980 Survey used the same cost estimate Categories as were used in 1978, with the exceptions of Categories I and II. These Categories are:

Category I - SECONDARY TREATMENT. This included costs for facilities to achieve secondary levels of treatment, regardless of the treatment levels required at the facility site. Incremental costs for treatment levels above secondary were reported in Categories IIA and IIB.

Costs for systems designed to serve individual residences are reported in Category I. For purposes of the Survey, "best practicable wastewater treatment technology (BPWTT)" and secondary treatment were considered synonymous.

Category IIA - ADVANCED SECONDARY TREATMENT (AST). Reported are incremental costs above secondary treatment levels to achieve advanced secondary levels of treatment, for those facilities that must achieve such levels. This requirement generally exists where water quality standards require removal of standard pollutants at higher levels than 85 percent or 30/30; but less than 95 percent removal, or 10/10.

Category IIB - ADVANCED WASTE TREATMENT (AWT). Incremental costs above AST are reported for those facilities which require advanced levels of treatment. This requirement generally exists where water quality standards require removal of such pollutants as phosphorus, ammonia, nitrates, or organic and other substances. In addition, this requirement exists where removal requirements for conventional pollutants exceeds 95 percent.

The definitions of the treatment categories (I and II) were changed from 1978 to 1980 to more accurately reflect the incremental cost of AST and AWT projects, relative to secondary costs. This change affected the split of these costs only, and did not result in the reporting of more or less needs.

Category IIIA - CORRECTION OF INFILTRATION/INFLOW. Included in this category are costs for correction of sewer system infiltration/inflow problems. Costs could also be reported for a preliminary sewer system analysis and for a detailed Sewer System Evaluation Survey.

Category IIIB - MAJOR REHABILITATION OF SEWERS. Requirements for replacement and/or major rehabilitation of existing sewer systems were reported in this category. Costs were reported if the corrective actions were necessary to the total integrity of the system. Major rehabilitation is considered to be extensive repair of existing sewers beyond the scope of normal maintenance programs, where sewers are collapsing or structurally unsound.

Category IVA - NEW COLLECTOR SEWERS. This category included costs of construction of new collector sewer systems and appurtenances designed to correct violations caused by raw discharges, seepage to waters from septic tanks and the like, and/or to comply with Federal, State or local actions.

Category IVB - NEW INTERCEPTOR SEWERS. Included in this category were new interceptor sewers and transmission pumping stations necessary for the bulk treatment of wastewaters. Outfall sewers were also included in this category.

Category V - CONTROL OF COMBINED SEWER OVERFLOW (CSO). Costs reported for this category were for facilities to prevent and/or control periodic bypassing of untreated wastes from combined sewers to achieve water quality objectives and which are eligible for Federal funding. It does not include treatment and/or control of stormwaters in separate storm and drainage systems.

The costs of abating pollution in the urbanized areas from stormwater runoff channelled through sewers and other conveyances used only for such runoff are reported in Category VI. The Category VI estimates are discussed separately in Chapter VI.

The incremental cost for removal of pollutants such as toxic substances are not included in the Needs Survey. The 1980 Survey does not reflect the effects of changes in the Clean Water Act due to the Industrial Cost Exclusion (ICE).

Costs for projects involving goals beyond pollution control are called multiple-purpose projects. Costs for these projects were split into two parts: water pollution costs, which are reported in the Needs totals, and other costs, which are reported separately.

In addition, for the first time, EPA has attempted to estimate the total costs of municipal wastewater treatment. These estimates include many costs which are currently not grant eligible, and are fully borne by State and local governments and citizens.

Appendix A explains the details of the conduct of the Survey.

B. Survey Dollars

All costs were estimated in January, 1980 dollars.

C. Population

Two time periods are of interest to the Needs Survey for population purposes. The first of these is the present, defined as the July, 1979 population of the States as calculated by the Bureau of the Census. The second population of interest is the future or projected population, based on Bureau of Economic Analysis (BEA) projections for the year 2000. The BEA population projections are used consistently in the construction grants program.

Population estimates and projections are used as State population ceilings for Needs Survey purposes in Categories I-IV. These ceilings are not applicable to Category V.

III. RESULTS OF THE SURVEY

A. EPA Assessment

The EPA assessment of the dollar need for construction of municipal wastewater treatment facilities to serve year 2000 populations is $119.90 billion in grant-eligible Categories I through V. The States' estimate for the same needs are $120.60 billion for Categories I-V.

Total needs in constant dollars have been reduced by $10.67 billion (eight percent) since the 1978 Survey.

Table A contains a summary of national needs by Category. Appendix C contains tables detailing the Survey results.

Included in the Needs assessment is $55.8 billion for Categories I, II and IVB (treatment plants and interceptors) that reflect the costs for the traditional Water Quality Program of Treatment Plants and Interceptor Sewers. Needs for treatment plants alone are $34.5 billion. Of the treatment need, $28.8 billion (84 percent) is required to achieve secondary levels of treatment, and $5.6 billion (16 percent) is for treatment levels higher than secondary.

Two levels of Category V estimates (Recreation and Fish and Wildlife) were developed in the 1980 Survey in order to establish a relationship between the cost of pollution control for CSO and the stream use benefits measured. The costs reported in this 1980 Needs Survey depend upon the water quality criteria adopted to achieve the recreation and the fish and wildlife water quality objectives. The criteria used in the Survey are presented in Appendix A. The estimated cost to achieve the recreation water quality objective (i.e. waters safe for full body contact) is $37.2 billion. The estimated cost to achieve the fish and wildlife objective is $21.9 billion. Unless otherwise noted, the Category V estimate and references presented elsewhere in this report are for the recreation water quality objective. Only Table 24 in Appendix C lists the Category V need for fish and wildlife objective by State. The two estimates are not additive, rather they only represent two independent stream use objectives.

B. Independent State Estimates

After EPA formulation of cost estimates, States were asked to review these estimates and concur or provide additional data to support differing costs. In many cases, these data were supplied, and the resultant EPA assessments reflect those changes.

TABLE A
1980 Needs Survey Summary Costs
(January, 1980 Dollars in Billions)

NEEDS CATEGORY		EPA ASSESSMENT	STATE ESTIMATE	DIFFERENCE	PERCENT DIFFERENCE
I	Secondary Treatment	28.84	29.23	.39	1.4
IIA	Incremental Costs above Secondary to Achieve Advanced Secondary Levels (AST)	4.21	4.21	0	0
IIB	Incremental Costs above AST to Achieve Advanced Treatment Levels (AWT)	1.43	1.43	0	0
IIIA	Infiltration/Inflow	2.50	2.50	0	0
IIIB	Replacement and/or Rehabilitation	5.97	5.97	0	0
IVA	New Collector Sewers	18.45	18.46	.01	0
IVB	New Interceptor Sewers	21.33	21.44	.11	0.5
V	Combined Sewer Overflows	37.17	37.57	.40	1.1
TOTAL	I & II (Treatment)	34.48	34.87	.39	1.1
TOTAL	I, II, IVB	55.81	56.31	0.5	0.9
TOTAL	I-V	119.90	120.81	0.9	0.8

In some instances, however, differences in cost estimates were irreconcilable between EPA and State participants. In this case, State participants provided an independent State estimate of need differing from the EPA estimate (Appendix C, Table 2), and usually higher in cost.

The reason for differing cost estimates was, in general, not associated with construction costs themselves, but with States' beliefs that national Survey guidelines should be amended and/or adjusted to more accurately reflect local conditions or needs.

C. Differences between State and EPA Estimates

A total of over 210,000 possible individual cost estimates were investigated by EPA. Over 57,000 of these possible estimates resulted in a need. Table 44 shows for each State the number of individual cost estimates made by EPA in Categories I-IV (treatment plants and sewers), which resulted in a need. For Category V (control of combined sewer overflow), one estimate per State was made for the capital cost of achieving the desired levels of control for year 2000 populations. A total of eight States and Territories submitted separate State estimates for at least one facility.

Of over 210,000 separate potential cost estimates investigated by EPA, only 81 independent estimates were submitted by States, representing 0.6 percent of the Needs. Table 45 shows for each State the number of independent estimates submitted in Categories I-IV, by Category of Need. These independent estimates are:

State	Percent of Number of State Estimates	Percent of EPA Dollar Assessment
Arizona	2.2	30.6
California	.001	4.1
New York	.0001	1.1
South Dakota	.002	.02
Texas	1.0	0.4
Wisconsin	.01	8.5
Wyoming	.01	6.0
Guam	1.4	62.5

All other States and Territories reported no independent State estimates differing from EPA estimates.

Most of these independent State estimates were based on State developed cost curves or State population projections exceeding allowable ceilings. Other reasons for separate estimates include disagreement on allocation of dollars between Category I and other categories, inclusion of ineligible facilities, and differing opinions on treatment alternatives. The State of Wisconsin submitted a separate estimate for control of Milwaukee's combined sewer overflows, based on a draft facility plan prepared in accordance with a stringent court order.

D. Assessment of Backlog

A continued part of the Survey was the assessment of need for present populations (the backlog of need). Needs for Categories I-V present populations are estimated to be $91 billion, or 76 percent of the year 2000 needs. Note that because of their nature, year 2000 needs for Categories IIIA (infiltration/inflow correction) and IIIB (major sewer rehabilitation) are almost exclusively all backlog needs. Similarly, because combined sewer systems are no longer built, Category V backlog needs are equivalent to the year 2000 needs. In addition, for reasons detailed in section 211 of the Clean Water Act and the Construction Grant Regulations (40 CFR 35.925-13), about 80 percent of the Category IVA (collector sewers) needs for year 2000 are theoretically also backlog needs.

The differences, therefore, are most graphically illustrated in Categories I, II, and IVB (treatment plants and interceptor sewers), where backlog needs represent only 55 percent of the year 2000 needs (Table 43). Backlog and 2000 needs are presented by Category in Table B and in Tables 39-41 in Appendix C.

TABLE B

YEAR 2000 AND BACKLOG NEEDS

NEEDS CATEGORY	Year 2000 EPA ASSESSMENT	BACKLOG ESTIMATE	PERCENT DIFFERENCE
I (Secondary Treatment)	28.84	18.53	36
IIA (Advanced Secondary)	4.21	2.66	37
IIB (Advanced Treatment)	1.43	.96	33
IIIA (Infiltration/Inflow)	2.50	2.50	0
IIIB (Replacement and/or Rehab.)	5.97	5.97	0
IVA (New Collector Sewers)	18.45	14.88	19
IVB (New Interceptor Sewers)	21.33	8.45	60
V (Combined Sewer Overflow)	37.17	37.17	0
TOTAL TREATMENT (I, II)	34.48	22.15	36
TOTAL I, II, IVB	55.81	30.59	45
TOTAL I-V	119.90	91.11	24

The differences between backlog and year 2000 needs are substantial both because of the 23 percent increase in population projected from the present (220 million persons) to the year 2000 (270 million persons) and to the increase in percent of population projected to be served by municipal systems (from 69 percent at present to 88 percent in year 2000).

Backlog needs have reduced by $6.1 billion (6 percent) since the 1978 Survey. $2.6 billion of that reduction has occurred in Categories I, II, and IVB (treatment and interceptors). The backlog in those categories was reduced by 7.8 percent. All of these reductions were due primarily to grant awards made during the period between the two surveys.

The costs reported for the backlog are sufficient only for facilities necessary to serve the June, 1979 populations. They do not include any costs for reserve capacity which would be required by the Act to be included in these facilities for population growth beyond 1979. They also exclude estimates for treatment plants and sewers that were not necessary at all in 1979, but are projected to be necessary for year 2000 populations. Backlog needs, as determined by EPA, are shown in Tables 38, 42, and 43 in Appendix C.

E. Costs of Plants Requiring Treatment More Stringent than Secondary (Category II)

Category II cost estimates consist of incremental costs above secondary for each treatment facility where required treatment levels are higher than secondary. Total treatment costs are split as follows:

1. To upgrade all facilities to secondary treatment levels - $28.8 billion. Secondary treatment projects represent 85 percent of the treatment projects, and 84 percent of the total treatment dollar needs.

2. To upgrade Category I facilities from secondary levels to advanced secondary levels where required. Advanced secondary levels are achieved in general when effluent limits for BOD are between 30 and 10 mg/l (85-95 percent removal) and when no nitrogen removal requirements exist. These costs are estimated at $4.2 billion, or 12 percent of total treatment dollar needs, and 12 percent of treatment projects.

3. To raise Category IIA facilities from advanced secondary levels to advanced treatment levels (AWT) where required. Advanced treatment is defined as removal of BOD above 95 percent (less than 10 mg/l) or nitrogen removal requirements. The estimate for AWT costs is $1.4 billion, which represents 4 percent of total treatment needs, and 3 percent of treatment projects.

F. Urban/Non-Urban/Rural Needs

Needs in Standard Metropolitan Statistical Areas (SMSA's) were estimated, as well as needs outside the SMSAs. While the areas outside of SMSAs may include communities of up to 50,000 population, this criterion provides some idea of the relative division between urban and non-urban needs. Table C shows the split of year 2000 needs into SMSA/non-SMSA and rural categories. This table shows that while urban areas have only 70 percent of the total population, they have 79 percent of the total needs. Similarly rural areas have only eight percent of the national population, yet have 16 percent of the national need.

TABLE C
URBAN/RURAL NEEDS
(Percent of Need)

CATEGORY	URBAN (SMSA's) (Pop. greater than 50,000)	SMALL TOWNS & CITIES (Pop. 3,500 to 50,000)	RURAL (Pop. less than 3,500)
I	68	13	19
IIA	81	15	4
IIB	85	11	4
IIIA	69	18	13
IIIB	98	1	1
IVA	69	4	27
IVB	77	11	12
V	82	18	
TOTAL I & II	70	13	17
TOTAL I, II, IVB	73	12	15
TOTAL I-V	79	5	16
PERCENT OF POPULATION	70	22	8

G. Needs for Large Metropolitan Areas

Major U.S. metropolitan areas have large needs. Nineteen such cities have needs above $1 billion. The New York metropolitan area is the city with by far the greatest need, estimated at $11 billion in Categories I-V.

As an adjunct to the 1980 Survey, EPA has produced separate community profile reports for 106 Standard Metropolitan Areas which had treatment needs (Category I & II) above $50 million in the 1978 Needs Survey. The purpose of these profiles is to provide a better understanding of the individual and collective characteristics of the nation's high-need metro areas.

In addition to the 106 metro-area profile reports, EPA also has produced reports on 25 inner-city areas.

These reports are available from EPA. Appendix D shows the list of cities for which reports were produced, and provides ordering information.

H. Multiple Purpose Needs

Some wastewater treatment and conveyance facilities are designed for purposes in addition to those necessary for compliance with the pollution abatement provisions of the Clean Water Act as outlined in the NPDES permit. Such facilities are called multiple-purpose facilities. Only costs for the purpose of water pollution control are eligible for Construction Grants funding, so only grant eligible costs are included in the Category I-V results for the 1980 Needs Survey. This section of the report describes the results of an inventory of proposed multiple-purpose facilities performed in conjunction with the 1980 Needs Survey.

The methodology used in splitting total project costs into multiple-purpose and water pollution control categories is given below:

1. The cost for the most cost-effective water pollution control alternative was included in the 1980 Needs Survey when the 201 facility plan had been approved by EPA. If the facility plan had been completed but not yet approved, the average of the cost estimates for the water pollution control alternatives were reported in the Survey and the average of the cost estimates for non-pollution control were reported separately. If the facility plan was incomplete or if no planning had been done, EPA rule-of-thumb costs for pollution control were reported in the Survey, and the best available costs for non-pollution control were reported separately.

2. Costs for new plants with land treatment of effluent considered to be water pollution control costs were reported in the Survey. Land treatment is considered to be a single-purpose pollution control project only if the land is an integral component of the treatment process necessary to achieve the limits of the NPDES permit. Any costs for treatment or conveyance works proposed to achieve levels of treatment more stringent than specified in the NPDES permit were reported separately as multiple-purpose needs.

3. Multiple-purpose costs for plants currently in operation and meeting permit requirements were reported as with zero needs in the Survey. All projected water reclamation needs were reported separately.

The dollar needs for proposed multiple-purpose facilities are summarized in Table D. This table gives the total cost for all multiple purpose projects. In addition, the total cost is split into the eligible water pollution control and the multiple-purpose cost components. The treatment and the conveyance components of the multiple purpose cost are also identified.

Facilities designed to provide irrigation for agricultural or public lands constitute by far the largest proportion of multiple-purpose facilities inventoried during this Survey. Industrial reuse and ground water injection are also common multiple-purpose schemes. Table E shows the distribution of types of surveyed multiple-purpose projects. Information concerning revenues generated by multiple-purpose facilities was generally not available and is, therefore, not included.

Approximately 72 percent of the estimates were derived from Step 1 planning documents. Another 18 percent of the estimates are the result of Step 2 design. The remaining 10 percent of the costs are from projects having proceeded beyond the Step 2 design level.

The multiple-purpose costs given in Table D are not all-inclusive. Costs for Category V reflect estimated grant-eligible pollution control needs. Category VI estimates (Chapter VI) are also for pollution control, although not presently grant-eligible. Needs for flood control or urban drainage are not included in the Category V or VI estimates nor could they be identified in the multiple-purpose costs estimate. The storage cost required for urban drainage is considered a multiple purpose cost, but it was not identified due to a lack of information.

1980 Needs Survey
Table D
Multiple-Purpose (MPP) Needs Estimates
January, 1980 Dollars in Thousands

State	Number of Projects	Total Cost of Projects	Pollution Control Costs [1]	MPP Costs[2]	MPP Treatment Costs	MPP Conveyance Costs
Arizona	6	$ 47,048	$ 15,769	$ 31,279	--	$ 31,279
California	80	1,584,580	874,597	709,983	$470,491	239,492
Colorado	2	16,743	16,120	623	623	N/A
Florida	8	91,745	91,745	N/A	N/A	N/A
Nevada	3	14,783	14,076	707	N/A	707
N. Carolina	1	1,998	1,728	270	N/A	270
Oklahoma	1	1,496	1,496	N/A	N/A	N/A
Texas	7	13,450	10,677	2,773	N/A	2,773
U.S. Totals	108	$1,771,843	$1,026,208	$745,635	$471,114	$274,521

[1]Costs eligible for funding; Reported in Needs Survey totals

[2]Costs ineligible; Reported here only

1980 Needs Survey
Table E
Types of Multiple Purpose Treatment Facilities

Type of Facility	Number Surveyed
Agricultural Irrigation	49
Public Lands Irrigation	25
Industrial Reuse	5
Ground Water Injection	2
Ground Water Percolation	2
Other Reuse Purposes[1]	8
Combinations[2]	16
Total	105

[1]Other purposes include Methane generation for commercial sales, coincineration of sludge and solid waste, land reclamation with sludge, and recreation.

[2]Some multiple purpose facilities were designed to fulfill several of the above purposes.

IV. COMPARISON WITH THE 1978 SURVEY

A. Treatment Plants and Sewers (Categories I-IV)

The estimates of needs for the 1980 Survey in Categories I-IV built on the experience and information from previous Needs Surveys. EPA, in consultation with a working group of State representatives, determined that the Survey would be conducted for Categories I-IV on a facility-by-facility basis as in 1978. A consultant firm, URS, was competitively selected to augment the manpower available within EPA and the States. Survey guidance was prepared in conjunction with the States and discussed in detail during meetings held with the States at EPA's regional offices. All data from the 1978 Survey were pre-printed on the Survey reporting form as a starting point for the 1980 effort.

URS established its personnel in Denver, Colorado in the fall of 1979 and prepared estimates facility-by-facility on the basis of information in regional and State files. States were asked to review and comment on estimates and provide assistance, subject to the constraint that adverse impact on the progress of the construction grants program should be avoided as much as possible. Independent State estimates were recorded when agreement between the State and EPA was not possible.

The completed estimates were approved by the State and EPA, subjected to a rigorous quality check and entered into a computer file.

Table F shows the 1980 Survey results compared with the 1978 Survey. The results of the 1980 Survey track well with the 1978 results, given the volume of grants awarded and the inflation of construction costs experienced between Surveys. The net result was a decrease in needs of eight percent for Categories I-V. The major reasons for the differences in these estimates for Categories I-IV are summarized below:

TABLE F
COMPARISON OF 1980 SURVEY WITH 1978 SURVEY
AND CONSTRUCTION GRANT AWARDS IN 1978 AND 1979
(1980 Dollars in billions)

CATEGORY	1978 SURVEY	1980 SURVEY	DIFFERENCE	GRANT AWARDS
I & II (Treatment)	43.79	34.48	- 9.31	5.32
IIIA	3.00	2.50	- 0.5	.12
IIIB	6.00	5.97	- .03	.21
IVA	23.39	18.45	- 4.94	1.31
IVB	22.72	21.33	- 1.39	2.17
V	31.66	37.17	+ 5.51	.88
TOTAL I, II, IVB	66.51	55.81	- 10.70	7.46
TOTAL I-V	130.57	119.90	- 10.67	9.97

Reasons which increased needs:

1. All categories were substantially affected by the increased value of construction, estimated for Needs purposes at 11.5 percent per year. The 1978 Needs Survey total was $106 billion in 1978 dollars. These effects are responsible for an estimated $25 billion rise in needs, raising the 1978 total to $131 billion.

2. The completion of a national facilities inventory for the 1980 Survey resulted in the addition of over 2,000 facilities, almost all of which are very small facilities located in rural areas.

3. New and improved historical cost data were used to generate cost curves for use in the Survey which were substantially higher in cost than previous curves. The improvement in the quality of the curves, however, was significant as well.

B. Combined Sewer Overflow (Category V)

The 1980 Category V needs are 17 percent higher than those estimated in the 1978 Needs Survey, after adjustment for construction cost increases since January 1, 1978. The primary reasons for this is the increase in the volume and accuracy of information sources needed to make these estimates.

EPA did further work to correct and complete an inventory of combined sewer areas in the 1978 Needs Survey. The reported combined sewer acreage increased by 7 percent to 2.7 million acres as a result. Overall population served by combined sewer increased by 3.7 percent to about 42.4 million people due to identification of previously undetected combined sewer service areas.

There are 1,118 CSO areas in the revised inventory. Approximately 82 cities (each containing one to many CSO areas) have Category V needs greater than $50 million. These communities represent about 73 percent of the national CSO area and 85 percent of the national CSO population.

Further, additional research and more detailed site studies were used to determine the relationships between the costs to control pollution from combined sewer areas and the data collected for each combined sewer area. Better storage and conveyance cost relationships were used. This more detailed consideration of the individual characteristics of each combined sewer area is the major reason for the individual State needs changes from the 1978 Survey.

V. QUALITY OF FACILITY ESTIMATES, CATEGORIES I-V

The reliability of the cost estimates is dependent upon many factors. Highly accurate cost data can only be obtained if treatment facilities have been planned and designed adequately to meet projected water quality requirements. Also, cost estimation is related to the

ability to discern "historical" cost trends based upon actual treatment plant cost experience. Accordingly, EPA studied a large number of wastewater treatment plants employing a variety of treatment technologies. Using these data, EPA developed cost estimating procedures which were used in the cost estimation process when better quality data was not available.

Actual recent cost experience was studied in sewer construction and installation as well. EPA developed cost estimating procedures and rules of thumb for pipe costs when better data were not available.

Supplementary to EPA supplied treatment and pipe cost estimating procedures, differences in local construction costs were recognized by the provision of cost multipliers for each area of the United States. One multiplier was used when estimating treatment costs in each of sixty areas, and the second multiplier was used for sewers in each of thirty areas.

The cost estimates for Categories I, II, and IVB (treatment plants and intereceptors) are considered most accurate because of the many years of experience with these types of construction costs. Also, facilities in these Categories have been subjected to the most rigorous planning requirements.

The cost estimates for Categories IIIA, IIIB, and V (infiltration/inflow, rehabilitation and combined sewer overflow) are not considered to be as accurate as those for the other Categories, but the estimates are considered to have greatly improved.

Numerous infiltration/inflow studies and rules of thumb based on experience to date have resulted in a substantial improvement in the Category IIIA estimates. Estimating the repair cost of sewers which defy routine inspection creates a weakness in Category IIIB estimates. In addition, there are few instances nationwide where sewer replacement is anticipated prior to actual sewer collapse, a relatively common occurrence in older cities.

EPA accepted needs for infiltration/inflow correction and major sewer rehabilitation only when they could be documented by facility plans or engineering studies. Additional undocumented needs may exist in many areas. Costs of correction of infiltration/inflow, however, can be traded off against treatment costs. Major sewer rehabilitation may in many cases be considered an ongoing operation and maintenance problem as much as a capital need eligible for grants funds.

Category IVA (new collector sewers) cost estimates have improved since 1978. The quality of estimates in this category degrades quickly as non-uniform assumptions concerning future populations are introduced.

Therefore, Category IVA needs were limited to include provision for future populations of up to 1.5 times the 1972 population requiring new sewers, in accordance with the rule of thumb used in the construction grants program. Even though this limitation provides much better and more comparable eligible requirements for new collector sewers, it implicitly provides new collector sewer capacity for a great deal of future growth in vacant lots and on the fringes of communities in existence in 1972. Careful and detailed analysis of local conditions, as required in the facility planning process, would likely reduce the collector sewers eligible for construction grants below what was reported in the 1980 Survey. For this reason, the year 2000 estimates in Category IVA are still considered high, while the backlog estimates in this Category are considered to be a more accurate estimate of national need.

For Category V (control of combined sewer overflow), estimates are difficult to make due to the variations in the size, number and frequency of combined sewer overflows, the characteristics of the receiving waters, and many other factors. A substantial amount of study and research has been conducted on how much and what type of control of combined sewer overflow are required under varying conditions.

In addition, the Agency improved its inventory of combined sewer areas in the United States which provided more accurate data about each combined sewer area and its receiving waters. Several such improvements were made, including better storage and conveyance costs. The results of this work were incorporated in estimating needs for Category V, and the reported costs are considered more comparable and reliable than in 1978.

The shortcoming of the inventory was that in many cases, important physical data about local conditions such as the number and location of overflow points and receiving water characteristics, were not available in national studies or data files. As a result, a modelling approach for these cases was based on rules of thumb based on experience. The results, therefore, are not considered highly accurate for individual cities, although the State and national estimates are considered of good quality.

About 50 of the 82 cities (72 percent) with Category V needs greater than $50 million have initiated CSO facilities planning, but the plans are not complete or otherwise usable for Needs estimates. However, because of the degree of CSO planning done in Chicago and San Francisco, cost estimates for those two cities were made using the developed CSO facilities plans instead of using the model.

An important consideration for the the entire discussion of the quality of cost estimates is the substantial upgrading of the quality of technical data supporting costs in this Survey, compared to prior Surveys. These data are significantly improved and are being published concurrently with this report.

VI. CATEGORY VI. TREATMENT AND/OR CONTROL OF STORMWATERS

Although stormwater needs are not eligible for Federal grants, the cost required to treat or control pollution from separate storm sewers was estimated during the 1980 Needs Survey. This additional cost category, known as Category VI, includes the costs of abating pollution in the urbanized areas from stormwater runoff channelled through sewers and other conveyances used only for such runoff. The costs of abating pollution from stormwater channelled through combined sewers, which also carry sewage, are included in Category V.

The 1980 national stormwater treatment need to achieve recreation use benefits is estimated at $114 billion above the $119 billion for the other types of facilities surveyed. The 1980 need for stormwater control decreases to $66 billion if water quality improvement is limited to fish and wildlife uses.

The needs to meet recreation uses and the fish and wildlife uses are 57 percent and 93 percent higher, respectively, than those estimated in the 1978 Needs Survey, after adjustment for construction cost increases since January 1, 1978 (Table G). This increase in need is due to the increased cost of basic storage facilities necessary before special control or treatment processes can be applied. Storage costs increased primarily because storage sites could not be found close to overflow points.

The cost estimates for control of stormwater pollution vary greatly depending upon how the problem is approached. Category VI cost estimating methods are tentative at best. However, the estimates are based on a uniform methodology incorporating the state-of-the-art, which is not as advanced as that for combined sewer overflow. The methodology is described in Appendix A, III. Category VI estimates from the 1978 and 1980 Surveys to meet recreation objectives are presented by State in Table 13.

Table G
COMPARISON OF 1980 SURVEY WITH 1978 SURVEY
Year 2000 Needs for Treatment and/or Control of Stormwaters
Category VI
(1980 Dollars in Billions)

Water Quality Objectives *	1978 Survey	1980 Survey	Difference
Fish and Wildlife	34.23	66.08	+93%
Recreation	72.29	113.70	+57%

* The estimates shown for the two water quality objectives pertain to two separate alternatives; they are not additive.

VII. COMPREHENSIVE DOMESTIC WASTEWATER TREATMENT NEEDS

Introduction

An estimate of the total national needs for domestic wastewater collection and treatment is provided in this section. In addition to the construction grant eligible needs identified in the EPA Needs Survey, other related needs exist for domestic wastewater collection and treatment which have not been accounted for in past surveys. These additional needs consist of items which are not grant eligible and include the annual costs associated with wastewater collection and treatment. The magnitude of these needs for the period 1981-2000 were estimated based on actual expenditures for a selected base year. The capital construction needs, consisting of ineligible needs plus eligible needs identified in the Needs Survey, are combined with the projected composite expenditures for annual recurring costs to compute the total 1981-2000 needs estimate. Category VI stormwater treatment needs were not considered in this estimate but are discussed in Section VI of this report.

Methodology

Total expenditures for all wastewater collection and treatment functions were estimated for fiscal year 1978, the most recent period for which total expenditures could be tabulated. Total expenditures for the construction of public facilities, private facilities, residential systems, and annual operations and maintenance (O&M) costs associated with these facilities were determined. Privately-owned treatment systems include privately-owned treatment plants and collection systems such as those built by subdivision developers and operated by homeowner's associations or others. Residential systems consist of house laterals and individual on-site systems. All individual on-site systems were assumed to be septic tanks.

Other annual expenditures, including debt service, replacement, research and development, interest paid during construction, administration, and monitoring costs were also identified. Table H shows the categories of expenditures and the dollar total for each category for the base year 1978.

After determining actual expenditures in the base year, a projection of the total expenditure between 1981 and 2000 was prepared. The projection of future expenditures includes estimates for all the categories identified in the base year total. Table I shows the categories of expenditures and the dollar total for each category.

TABLE H
1978 AGGREGATE ANNUAL EXPENDITURES
(Millions of 1980 dollars)

ITEM		ESTIMATED EXPENDITURE	DOLLAR BASIS	EXPENDITURE 1980 $
CAPITAL OUTLAY				
1. PUBLIC SEWERAGE				
- Federal Grants and Loans	$4,833			
- Local Matching Funds	987			
- Federal Facilities	296			
- Funding by Municipalities for Projects with No Federal Participation	373			
SUBTOTAL =		$6,489	2 Q 78	$ 7,668
2. PRIVATE SEWERAGE				
- Privately Financed Treatment Facilities	$ 125			
- Privately Financed Collector Sewers	2,154			
SUBTOTAL =		$2,279	2 Q 78	$ 2,693
3. RESIDENTIAL SYSTEMS		$2,100	2 Q 78	$ 2,493
TOTAL CAPITAL OUTLAY =				$12,854
CURRENT OPERATIONS				
1. PUBLIC O&M		$2,819	2 Q 78	$ 3,303
2. PRIVATE O&M		48	2 Q 78	56
3. RESIDENTIAL O&M		323	2 Q 78	378
4. OTHER ANNUAL COST				
- Research and Development		$ 231	2 Q 78	$ 273
- Administration and Monitoring		397	2 Q 78	469
- Debt Service		1,280	2 Q 77	1,638
- Interest During Construction		81	2 Q 78	96
- Replacement Costs, Sewers		1,996	2 Q 79	1,996
- Replacement Costs, Treatment Facilities		933	4 Q 79	933
TOTAL CURRENT OPERATIONS =				$ 9,142
TOTAL ESTIMATED 1978 EXPENDITURE =				$21,996

TABLE I
TOTAL 1981-2000 NEEDS
(Millions of 1980 dollars)

ITEM	ESTIMATED EXPENDITURE 1981-2000
CAPITAL OUTLAY	
1. PUBLIC SEWERAGE	
- EPA Construction Grant Eligible Treatment Needs	$ 34,500
- Other EPA Grant Eligible	$ 85,400
- Other Federal Agency Eligible	42,051
- Federal Facilities	6,645
- Funding by Municipalities for Projects with No Federal Participation	8,375
SUBTOTAL =	$176,971
2. PRIVATE SEWERAGE	
- Privately Financed Treatment Facilities	$ 583
- Privately Financed Collector Sewers	51,338
SUBTOTAL =	$ 51,921
3. RESIDENTIAL SYSTEMS	$ 19,000
TOTAL CAPITAL OUTLAY =	$247,892
TOTAL ANNUAL EXPENDITURES	
1. PUBLIC O&M	$ 94,980
2. PRIVATE O&M	$ 1,390
3. RESIDENTIAL O&M	$ 7,590

ITEM		ESTIMATED EXPENDITURE 1981-2000
4. OTHER ANNUAL COSTS		
- Research and Development		$ 5,187
- Administration and Monitoring	8,911	8,911
- Debt Service		31,122
- Interest During Const.		1,824
- Replacement Cost, Sewers		37,924
- Replacement Treatment Plants		17,727
TOTAL ANNUAL EXPENDITURES		$206,655
TOTAL 1981-2000 NEEDS		$454,547

Total needs for the 1981-2000 period were determined, for the most part, by projecting the base year spending over the 19 year period. Most categories of expenditures were assumed to remain at levels comparable to the base year. Three categories of expenditures are projected to increase (in constant dollars). These are EPA grant eligible construction projects, construction of private and residential systems, and operation and maintenance of wastewater systems.

Expenditures for private and residential systems are projected to increase due to population growth and the associated need for new housing. Expenditures for EPA grant eligible construction and O&M are projected to increase based on the assumption that all needs identified in the 1980 Needs Survey will be satisfied by year 2000.

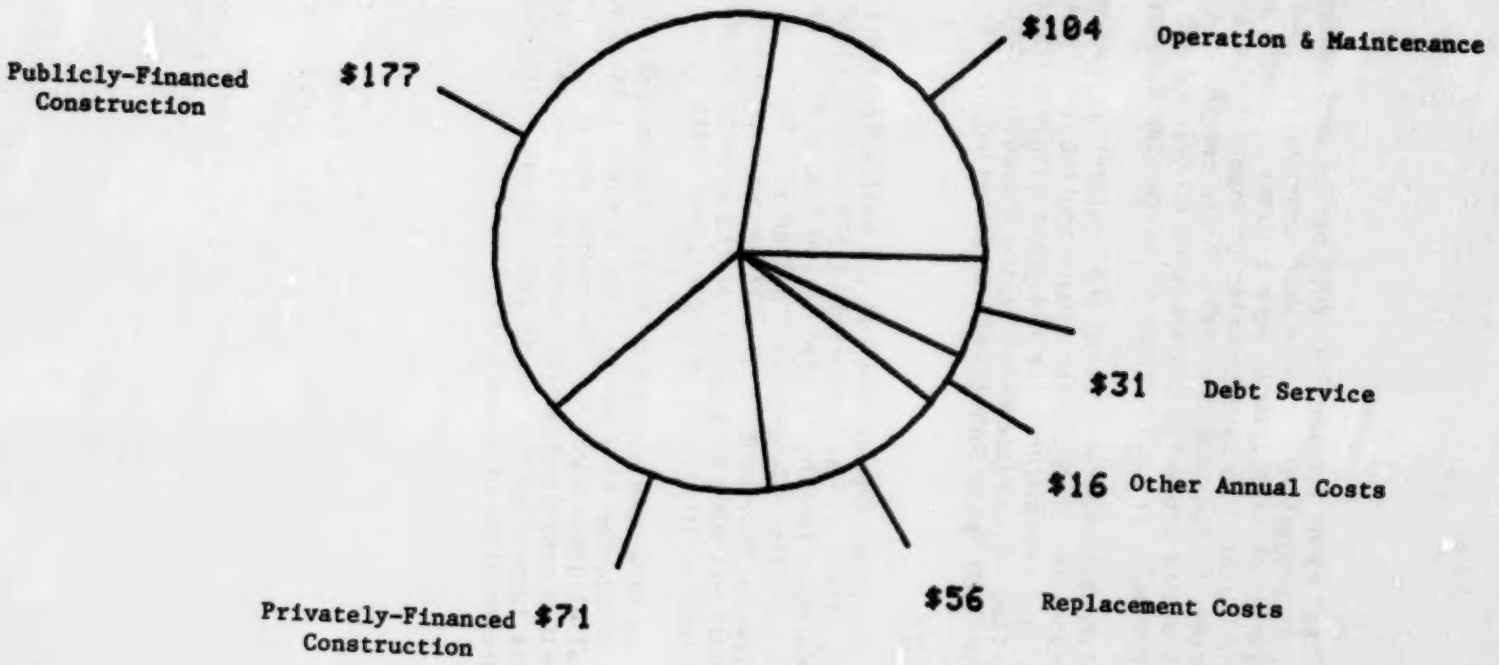
Results

The total expenditure for all wastewater functions, for the base year 1978, (Table H) was estimated at $22 billion (1980 dollars). The total expenditure for the 19 year period (Table I) is projected at $454.5 billion (January 1980 dollars). These estimates assume that all wastewater treatment needs will be met by the year 2000. Furthermore, no attempt was made to account for the effects of inflation or changes in the funding strategies of Federal and State agencies.

In 1978, EPA awarded $2.96 billion in construction grants which, in fourth quarter 1979 dollars, would satisfy $4.65 billion in needs. The total eligible needs for the period amount to $119.90 billion. While in itself a considerable sum, these needs are only 26 percent of the total needs identified for the 19 year period. Figure 1 provides a graphical representation of these projections.

FIGURE 1

REQUIRED EXPENDITURES, 1981-2000
(BILLIONS OF 1980 DOLLARS)



TOTAL NEEDS FOR DOMESTIC WASTEWATER COLLECTION & TREATMENT = $455 BILLION

Reliability of the Comprehensive Needs Estimate

The figures reported in this survey, and the resulting totals, may be considered a first order approximation of comprehensive costs of domestic wastewater collection and treatment. For the most part, the estimates were gathered from published or existing sources (Table J). It was beyond the scope of this study to prepare categorical estimates by independent means. Rather, the primary aim of this survey was to identify, gather, and collate existing data to compile an estimate of total costs and needs. Therefore, varying levels of confidence can be associated with the numbers reported in this survey.

Public sewerage capital outlay costs were provided by the U.S. Bureau of Economic Analysis (BEA) and were primarily based on the "Value of New Construction Put in Place," published by the Bureau of the Census monthly. These figures are compiled in part by direct measurement and in part by indirect estimation. Although potential errors in the data are described, the data as adjusted by BEA is considered to be highly accurate.

Capital and O&M costs for residential systems are compiled by BEA using average cost, number of housing starts, and percentage of housing units involved for either house laterals or septic tank systems. Average cost was obtained in telephone interviews with installers in various parts of the Nation. Although some error can be expected in this type of sampling, the figures reported represent good estimates of residential system expenditures.

Public sewerage O&M costs used in this study were obtained from a Census Bureau questionnaire sent to State and local governments, including special purpose governments and districts. Current operation expenses for sewers and sewage disposal is one item included on the questionnaire. (A separate item is included for sanitation other than sewage, such as refuse disposal).

The Census Bureau tabulations of relative standard errors for sewerage current operations indicate that the relative standard error on a national basis for this item is less than 4.9 percent of the total. It is recognized that other independently derived estimates for public O&M expenditures are in existence. However, due to the good statistical base for the Census Bureau estimates (85-95 percent useable responses from the questionaire sent to the design sample population), the estimates presented herein are the most accurate available.

The costs reported for research and development and administration and monitoring have the same or greater confidence interval as public sewerage O&M, because these components were obtained by similar techniques.

TABLE J

SOURCES OF INFORMATION
COMPREHENSIVE DOMESTIC WASTEWATER NEEDS FOR
THE PERIOD 1981-2000

ITEM	SOURCES
CAPITAL OUTLAY	
1. Public Sewerage	2, 6, 10
2. Private Sewerage	3, 5
3. Residential Systems	2, 9
CURRENT OPERATIONS	
1. Public O&M Costs	7, 10
2. Private O&M Costs	11
3. Residential O&M Costs	2, 9
4. Research and Development	1, 8
5. Regulation and Monitoring	1, 8
6. Debt Service	4, 7
7. Interest During Construction	11
8. Replacement Costs	8, 10

LIST OF SOURCES

1. U.S. Bureau of Economic Analysis
2. Pollution Abatement and Control Branch, U.S. Bureau of Economic Analysis
3. Office of Housing, U.S. Dept. of Housing and Urban Development
4. Municipal Finance Officers Association
5. National Association of Homebuilders
6. Construction Statistics Division, U.S. Bureau of the Census
7. Finance Branch, Governments Division, U.S. Bureau of Census
8. Office of Planning and Management, U.S. Environmental Protection Agency (U.S. EPA)
9. ONSITE WASTEWATER TREATMENT AND DISPOSAL SYSTEMS, U.S. EPA Technology Transfer Design Manual
10. SURVEY OF NEEDS FOR MUNICIPAL WASTEWATER TREATMENT FACILITIES, U.S. EPA
11. No available data; Independently formulated.

Other current operations costs do not lend themselves to computation of confidence intervals. The debt service cost was obtained from the Municipal Finance Officer's Association. This number was derived by multiplying total municipal debt service times the percentage of total municipal construction that is wastewater related. Interest during construction and replacement costs were calculated empirically and thus have no statistical basis.

Capital and O&M costs for private sewerage facilities were one of the few quantities estimated outright. The absence of direct sources of information on this subject makes possible a potentially substantial error in the resulting estimate. However, the relatively small magnitude of this component makes even a substantial error practically insignificant.

VIII. SUMMARY AND CONCLUSIONS

The 1980 Needs Survey is the best estimate available of the nationwide costs of compliance with the goals of the Clean Water Act of 1977. It is clear from the 1980 Needs Survey that in order to meet the water quality goals of the Act, a substantial amount of monies will be required. For the third time in a Needs Survey, the effects of the funds spent to date are noticeable in Categories I, II and IV.

The latest estimates reflect a better formulated and more consistent survey methodology, greater amounts of information now available from such sources as new facility plans, basin plans and discharge permits, and the further expansion of the survey to include all facilities nationwide.

Significant and measurable progress has been made in meeting needs for treatment plants. The current survey shows a decrease in total treatment needs of $9 billion (twenty-three percent) since 1978.

The 1980 Survey estimates the overall remaining needs for treatment plants at $34.5 billion. Additional Clean Water Act eligibilities, such as interceptor sewers ($21 billion), collection sewers ($18 billion), and control of combined sewer overflows ($37 billion) raise the total remaining needs to $120 billion. All costs are reported in January 1980 dollars.

Grant awards have reduced needs between 1978 and 1980. Other factors such as the increased value of construction have offset these reductions. The net result is an estimate eight percent lower than reported in the 1978 Needs Survey. New projects approved between the 1978 and 1980 surveys account for a reduction of more than $9 billion in the present survey estimate. More careful reporting and better cost estimates have resulted in reduced estimates for several categories of need.

The 1980 estimate includes $37 billion for control of pollution from combined sewer overflows. This is about 19 percent higher than the estimate made in 1978, which reflects improved estimation techniques as well as the completion of an inventory of combined sewer areas.

Greater progress could be achieved toward treatment goals with a more focussed funding strategy. Treatment plant needs are estimated at $34.5 billion. If these needs are to be met, funding would have to be focussed on these needs. Without such a focus, treatment plant needs are unlikely to be met before the year 2000.

Studies of the construction schedules of those metro areas with treatment needs above $50 million shows that a peak funding requirement for treatment construction will likely occur in 1983 or 1984; and could begin as early as 1982. These needs alone could use all of the available construction grants funds during those years, and would confirm the need to focus funding on treatment facilities.

The treatment needs for 1979 populations (the backlog of treatment needs) represent $22.2 billion, which is 64 percent of the total year 2000 need. Overall, backlog needs are $91.1 billion, or 76 percent of year 2000 needs.

Needs for treatment levels greater than secondary have dropped markedly since the 1978 Survey. The reason for this reduction has been the increased attention that AWT/AST projects have received. This has resulted in a more detailed analysis of the need for AWT facilities based on reevaluation of the attainability of certain water quality standards. The remaining treatment needs greater than secondary levels are considered to better represent those areas where water quality requirements truly mandate higher treatment levels.

Rural areas and large cities have a large share of the nation's need. Rural areas below 3,500 population have sixteen precent of the total need; but represent only eight percent of the nation's population. Similarly, cities above 50,000 population have 79 percent of the national need; but only represent 70 percent of the nation's population.

In conclusion, the Survey results show that the construction grants program is producing significant and measurable results toward the goals of the Clean Water Act, by almost any measure.

APPENDIX A

CONDUCT OF THE SURVEY

I. CATEGORIES I-IV (Treatment Plants and Sewers)

A. Background

Drawing on the experience of prior Surveys, EPA and the States formed a working group to determine the strategy for the conduct of the 1980 Survey. Several Survey goals were identified by the group:

1. That the Survey identify and quantify all needs.

2. That the conduct of the Survey be nationally uniform.

3. That the utilization of scarce State personnel and dollar resources for the Survey be minimized.

4. That a complete inventory of municipal wastewater facilities be compiled.

5. That the survey results provide a basis for the allocation of construction grants funds among the States.

The Survey approach taken for Categories I-IV (treatment plants and sewers) as a result of these recommendations was:

1. An independent consultant, paid by EPA, would conduct the Survey on a facility-by-facility basis for Categories I-IV. The consultant's personnel were to formulate cost estimates. URS Company, with Headquarters in Denver, and company resources sufficient for this large effort was competitively selected.

2. Survey guidance and methodology were formulated for Categories I-IV in draft, and circulated to all parties involved in the Survey. State comments were solicited, and final guidance was issued with reflected those comments.

3. While national uniformity of estimating procedures was a Survey goal, the cost and construction differences inherent to various sections of the country were recognized and accommodated where possible.

The formal Survey of Categories I-IV began with orientation meetings conducted in EPA Regional offices where logistics, target dates, and individual State problems were discussed and resolved. States were asked only to provide as much investment in personnel for the Survey as they considered prudent; but were invited to participate fully in the formal Survey field work.

The Survey field work was conducted in the spring, summer, and fall of 1980. At the same time work on Categories V was undertaken by URS Company and its subcontractor CH_2M Hill.

As estimates for Categories I-IV were completed, copies of the estimates were reviewed by States on a facility-by-facility basis. When cost agreement between EPA and State personnel could not be reached, separate estimates were submitted by States and have been included in this report.

Facility estimates were reviewed and accepted and/or approved at four levels: 1) contractor, 2) EPA Regional Office, 3) State, and 4) EPA Headquarters.

After machine preparation, data for Categories I-IV were summarized for this report.

B. Survey Methodology - Operational Guidance for Categories I-IV

Participant guidance for the Survey was formulated by EPA, the States, and the consultant working closely together. This document included the following subjects:

1. Responsibilities of the participants.

2. Target dates for project milestones including the calendar for the Survey and the consultant's contractural obligations.

3. Descriptions of all data sources to be provided to participants to aid in completion of the Survey.

4. Briefing schedules for the participants.

5. Provisions for State and Regional review of consultants data prior to finalization.

6. Definitions of terms for needs purposes. Standards were established for definitions of secondary treatment, design year, units of measurement, cost estimating, basis of cost estimate, design flows, and infiltration/inflow reporting.

7. Specific guidelines for completing Survey forms.

8. EPA adjustments to the 1978 Needs data base prior to its use as a starting point in 1980.

9. Cost estimating procedures to be used when more reliable local procedures were not available. These included estimating procedures for treatment costs and new sewers, with factors provided for determination of cost variation in any of sixty areas in the vicinity of major cities in the United States.

10. Interceptor sewers sizing tables.

As a result of meetings and other communications with all the States, the guidance was supplemented by request to include:

1. "Rules-of-Thumb" for estimating needs based on best engineering judgement. All of the participants understood that rules-of-thumb would be used only when better information was not available. Examples are:

a. Per capita domestic and commercial flows were allowed consistent with the cost effective regulations.

b. Collector and interceptor lengths were limited to sixteen feet and one foot per capita, respectively, of unsewered population.

2. A procedure for designating the basis of cost estimates.

3. Additional cost data, showing national capital costs for:

a. pumping stations
b. aerated lagoons and waste stabilization ponds

4. Procedures for estimating backlog needs for all Categories.

5. Instructions for reconciliation of populations.

6. Guidance for estimation of collector sewer costs.

7. Information on grant eligibilities for land costs.

8. Guidance for estimation of I/I analysis costs.

9. Small and individual treatment systems.

C. Basis of Cost Estimate for Categories I-IV

All individual cost estimates made in Categories I-IV of the Survey were to be accompanied with a basis of cost estimate, so that the quality of the estimate can be better determined. EPA has determined that the quality of cost estimates can be ranked from high to low as follows:

1. Engineer/Consultant Firm Estimate

2. Engineer/Consultant Preliminary Estimate

3. Cost-Effectiveness Analysis

4. Cost of Previous Comparable Construction

5. EPA Supplied Cost Estimating Procedures

6. Rough Estimates

Table 46 shows the percent of State needs reported by basis of estimate. Table 47 shows the relative quality of estimates by Needs Survey Category. Note that three bases of estimate (State Certification, Analysis Completed, and Evaluation Survey Completed), refer to Category III (Infiltration/inflow correction and major sewer rehabilitation) needs only, and have no application to other Categories.

These tables show the quality of the cost estimates made in the 1980 Survey is substantially higher than in 1978, when 37 percent of needs used EPA supplied cost curves.

D. Data Sources for Categories I-IV

1. The types of data needed in the Survey and the sources used to access these data were many. The major types of data used were:

a. population (year 2000 and present)

b. total flow (average, current design, and projected year 2000 design)

c. industrial flow (average, current design, and projected year 2000 design)

d. biological oxygen demand and suspended solids concentrations (average, current design, and projected year 2000 design)

e. ammonia and phosphorus removal requirements (average, current design and projected 2000 design)

f. treatment methods

g. sludge handling and treatment methods

h. level of treatment required

2. The sources of these data were:

a. 1978 Needs Survey data

b. Facility Plans (201 Step I Plan)

c. NPDES Applications and Permits

d. Grant Application Files

e. Grant Files and Grant Information Control System Data

f. Regional and/or Basin Plans (208 and 303 Plans)

g. Other Engineering Plans or Reports

h. State Water Quality Standards

E. Survey Preparation

The 1980 Survey form was generated by computer showing the 1978 Data of Record for each facility. Once the revised cost estimates were recorded on Survey forms for each facility, copies of the completed forms were provided for all parties participating in the Survey, primarily for State review and revision. The forms were then used to record the updated 1980 Needs Survey figures.

Census data for 1979 and BEA 2000 populations projections were used as State ceilings. State population totals were not permitted to exceed these ceilings.

As Survey forms were completed, they were double checked by EPA for the accuracy of the data collected and submitted. Each State was then given the opportunity to review and comment upon the revised data shown on Survey forms, and to review the total cost estimates for the State.

Where differences over cost estimates were not resolved, States submitted independent cost estimates on the form. Few independent State estimates were required.

II. CATEGORY V - (Control of Combined Sewer Overflow)

A. Background

Category V estimates were derived from a computer cost model as in the 1978 Needs Survey with two significant improvements which were:

1. Substantial upgrading of the model to reflect the current state of the art of CSO control.

2. Use of completed and approved facility plans in lieu of model estimates, where available.

Information collected for the CSO estimates included:

1. Location

2. Sewer system characteristics

3. Receiving water characteristics

4. Status of CSO correction planning

Sources of data for this information were:

1. State and local engineering reports

2. United States Geological Survey

3. National Combined Sewer System Data File

4. Facilities Plans or other planning documents.

Data collection and model upgrading and analyses for Category V were conducted concurrently with the work for Categories I-IV.

In November 1980, a draft of the results of the Category V work was mailed to States with a request for review. Because few comments were received from the States, few changes were necessary to the model and the data base.

B. Survey Methodology for Category V (Combined Sewer Overflow)

The methodology for estimating the cost to control combined sewer overflow to prevent periodic bypassing of untreated wastes from combined sewers was based on seven major factors. These factors were studied in 15 cities in the United States selected because of their diverse wet weather conditions and the availability of good data. Data generated by the 15 site studies were used to develop an estimate of the time water quality criteria would be violated.

The estimate is based on a model which evaluates all sources of pollution during dry and wet weather flow, quality, and reaeration capacity of the receiving water. The model then determines the treatment level of the CSO necessary to obtain water quality objectives.

Next, the model uses production theory and marginal cost analysis to identify the optimum mix of CSO controls to meet the required level of treatment. The site study analysis and other literature review led to the conclusion that offline storage of the CSO, in combination with management practices (i.e. street sweeping or sewer flushing) and any of four treatment processes, was more cost effective than other types of controls.

The model was applied to each of the 1,118 CSO areas for the Category V estimate and to the 320 urbanized areas (or State portions of urbanized areas) for Category VI estimates. Average state data were utilized for some variables where necessary.

The seven major factors which affect Category V costs are as follows:

1. Pollutants to be controlled.

The pollutants for which reasonable estimates of pollutant washoff and receiving water impact may be developed include: suspended solids, ultimate oxygen demand, total phosphorus (for lakes), and fecal coliforms. For other materials such as pesticides or heavy metals, little is known about their occurrence in the urban system to evaluate potential impacts.

2. Water quality criteria.

The water quality criteria applied to assess the assimilative capacity of a receiving water to obtain fish and wildlife uses are as follows:

a. Suspended solids.

The mean value of suspended solids concentration discharged to the receiving water from urban stormwater and combined sewer overflow sources should not exceed the mean value of the natural background suspended solids concentration for the subject receiving water on an annual baiss. This criteria applies except in cases where the allowable mean value of suspended solids concentration is less than 25 mg/l. In this case, a discharge limit of 25 mg/l shall apply.

b. Dissolved oxygen (DO).

The minimum receiving water dissolved oxygen concentration shall not average less than 2.0 mg/l for more than 4 consecutive hours; nor shall the minimum receiving water dissolved oxygen concentration average less than 3.0 mg/l for more than 72 consecutive hours (3 days). In addition, the annual average receiving water dissolved oxygen concentration shall be greater than 5.0 mg/l for all waters which will support warm water species and shall be greater than 6.0 mg/l for all waters which will support cold water species.

c. Ultimate Oxygen Demand (Carbonaceous and Nitrogenous Biological Oxygend Demand)

The required ultimate oxygen demand removal rate shall range as low as 40 percent (no dissolved oxygen problem) to as high as 90 percent.

d. Phosphorus

Average annual lake phosphorus concentration should not exceed 0.025 mg/l.

An additional effluent criteria is required above and beyond the above fish and wildlife criteria in order to maintain recreational water use:

e. Fecal coliform

A ninety-five percent removal of fecal coliforms shall be required for all flows. This criterion represents a basic change from the 1978 Survey, at which time a criterion of a maximum of two untreated overflow events per year was used.

3. Cost of Alternative Technologies Necessary to meet Required Treatment Level

The optimum treatment level is a function of the removal required from the storage/treatment systems, the pollutant type and the sewer system type (separate or combined). After the treatment level is selected, an optimum combination of control technologies is calculated for each combined sewer area. Streetsweeping and combined sewer flushing are employed at all treatment levels after calculation of the optimum level of efforts for these management practices. These levels of removal were found to be insufficient to satisfy the total required treatment level, so the remainder had to be removed by offline storage combined with an optimized treatment system.

The following four physical/chemical treatment processes were found to be the most cost-effective. The treatment system to supplement the storage facility was selected from the few. They were utilized in the optimization process as a basis for estimating the cost of treatment facilities to be combined with the cost of storage. The four processes are:

(1) microscreen
(2) flocculation - sedimentation
(3) dissolved air flotation
(4) high rate filtration

The cost of the selected storage/treatment system is then compared to the estimated cost of sewer separation. If the separation cost is less, then the sewer separation estimate was used. This occurred primarily in small communities.

4. Pollutant Sources from Dry Weather Flows.

The pollutant loadings from municipal dry weather sources are assumed to meet 1983 secondary treatment requirements. It is assumed that each population equivalent contributes the following:

a. BOD = 30 mg/l
SS = 30 mg/l
TKN = 28 mg/l
Pb = 0.04 mg/l

b. 100 gallons per capita of wastewater per day

5. Pollutant Loads from Wet Weather Sources

It was assumed that oxygen-demanding materials (i.e. BOD and TKN) will reach maximum accumulation in 15 days and that non-oxygen demanding material (i.e. suspended solids and lead) accumulate in a linear fashion. Pollutant accumulation rates were calculated from the Stromwater Management Model Level 1 equations.

6. Tolerance of Aquatic Species

The receiving water quality criteria established for the Survey take into account the pollution tolerance of aquatic species. These tolerances were considered for both short-term and long-term exposure to pollutants.

For additional bacteriological cleanup in combined sewer overflow and urban runoff beyond that required for protection of fish and wildlife, the storage capacity and the treatment rate were increased so that fecal coliforms were controlled to the 95 percent level.

7. Pollutant Control Levels Required

Each combined sewer area has differing receiving water characteristics which affect pollution control costs substantially. The degree to which pollutant control is required is a function of the overall assimilative stream capacity resulting from the receiving water characteristics.

The factors which led to the determination of required control levels in each combined sewer area are the upstream flow and quality, the combined sewer overflow, urban storm runoff, and the wastewater treatment plant effluent quality.

III. SURVEY METHODOLOGY FOR CATEGORY VI (STORMWATER CONTROL)

The methodology for estimating the cost to provide control and/or treatment of urban stormwater runoff channeled through sewers or other conveyances used only for such runoff is based on the same 15 site studies as the Category V cost estimation methodology. Also, the seven major factors which affect stormwater cost estimates are the same as for Category V, except that sewer flushing was eliminated as an alternative technology.

The cost estimates by State (and Territory) are base on regulations for the application of the NPDES Permit Program for separate storm sewers which were published in the Federal Register of March 18, 1976. In these regulations, the term "separate storm sewer" is defined as "a conveyance or system of conveyances . . . located in an urbanized area and primarily operated for the purpose of collecting and conveying stormwater runoff." In accordance with this guideline, the geographical areas which require control and/or treatment of stormwater runoff are urbanized areas of the Nation as defined by the U.S. Bureau of Census. The specific criteria for the delineation of an urbanized area is as follows:

1. A central city of 50,000 inhabitants or more, or twin cities with a combined population of at least 50,000, and with the smaller of the twin cities having a population of at least 15,000; and

2. Surrounding closely settled territory.

APPENDIX B

Reasons for Independent State Estimates Categories I-VI

Prior to finalization of estimates, all Survey forms were sent to States for review and comment. States were encouraged to provide as much additional information as possible to secure the best available estimates. Where EPA and State estimates differed, an attempt was made to resolve the differences. To secure the most accurate and nationally consistent cost estimates, adherence to the Survey guidelines and rules-of-thumb as formulated by the EPA/State Needs Survey Working Group was enforced. Where agreement on specific estimates could not be reached between EPA and State personnel, separate estimates were submitted by States.

Of approximately 210,000 possible estimates, 3,421 separate estimates were submitted by States. Most of these estimates were based on State-developed cost curves or State population projections exceeding allowable ceilings. Other reasons for separate estimates include disagreement on allocation of dollars between Categories I-IV versus Category V, inclusion of ineligible facilities, and differing inflation factors.

New York State submitted independent estimates for treatment plants in Nassau and Suffolk counties totalling about $200 million for treatment. To provide a population base for these estimates, State personnel shifted projected population from other parts of the State to Nassau and Suffolk. However, no corresponding reduction of needs was reported in the places where population was reduced. Therefore, EPA concluded that the additional need was already included in the total State estimate, and to include the higher Nassau/Suffolk costs would result in double-counting.

APPENDIX C

Summary Tables

Cost data from the 1978 Needs Survey are presented in summary tables included in this Appendix. The following tables show costs by State and U.S. totals:

Table 1	-	EPA Assessments of Needs by Category.
Table 2	-	Independent State Estimates of Needs by Category.
Table 3	-	Comparison of 1980 and 1978 EPA Asssement, Categories I-V (Recreation).
Table 4	-	Comparison of 1980 and 1978 EPA Assessments for Treatment Plants, Categories I and II.
Table 5	-	Comparison of 1980 and 1978 EPA Assessments for Categories I, II, and IVB.
Table 6	-	Comparison of 1980 and 1978 EPA Assessments for Category I.
Table 7	-	Comparison of 1980 and 1978 EPA Assessments for Category II.
Table 8	-	Comparison of 1980 and 1978 EPA Assessments for Category IIIA.
Table 9	-	Comparison of 1980 and 1978 EPA Assessments for Category IIIB.
Table 10	-	Comparison of 1980 and 1978 EPA Assessments for Category IVA.
Table 11	-	Comparison of 1980 and 1978 EPA Assessments for Category IVB.
Table 12	-	Comparison of 1980 and 1978 EPA Assessments for Category V (Recreation).
Table 13	-	Comparison of 1980 and 1978 EPA Assessments for Category VI.
Table 14	-	Per Capita Costs for Year 2000 and Present Population, Categories I-V (Recreation).

Table 15 - Per Capita Costs for Year 2000 and Present Population, Categories I, II, and IVB.

Table 16 - Per Capita Costs for Year 2000 and Present Population, Category I.

Table 17 - Per Capita Costs for Year 2000 and Present Population, Category IIA.

Table 18 - Per Capita Costs for Year 2000 and Present Population, Category IIB.

Table 19 - Per Capita Costs for Year 2000 and Present Population, Category IIIA.

Table 20 - Per Capita Costs for Year 2000 and Present Population, Category IIIB.

Table 21 - Per Capita Costs for Year 2000 and Present Population, Category IVA.

Table 22 - Per Capita Costs for Year 2000 and Present Population, Category IVB.

Table 23 - Per Capita Costs for Year 2000 and Present Population, Category V (Recreation).

Table 24 - Per Capita Costs, Category V (Fish & Wildlife).

Table 25 - Comparison of 1980 and 1978 EPA Per Capita Assessments, Categories I-V (Recreation).

Table 26 - Comparison of 1980 EPA Assessments with State Estimates for Categories I-V (Recreation).

Table 27 - Comparison of Per Capita Differences Between the EPA and State Estimates, Categories I-V (Recreation).

Table 28 - Comparison of 1980 EPA and State Estimates, Categories I and II.

Table 29 - Comparison of 1980 EPA and State Estimates, Categories I, II, and IVB.

Table 30 - Comparison of 1980 EPA and State Estimates, Category I

Table 31 - Comparison of 1980 EPA and State Estimates, Category IIA.

Table 32 - Comparison of 1980 EPA and State Estimtes, Category IIB.

Table 33 - Comparison of 1980 EPA and State Estimtes, Category IIIA.

Table 34 - Comparison of 1980 EPA and State Estimates, Category IIIB.

Table 35 - Comparison of 1980 EPA and State Estimates, Category IVA.

Table 36 - Comparison of 1980 EPA and State Estimates, Category IVB.

Table 37 - Comparison of 1980 EPA and State Estimates, Category V (Recreation).

Table 38 - Needs for Current Populations (Backlog), Categories I-V.

Table 39 - Comparison of Year 2000 and Backlog Needs, Categories I-V.

Table 40 - Comparison of Year 2000 and Backlog Needs, Categories I and II.

Table 41 - Comparison of Year 2000 and Backlog Needs, Categories I, II, and IVB.

Table 42 - Per Capita Backlog of Needs, Categories I-V.

Table 43 - Per Capita Backlog of Needs, Categories I, II, and IVB.

Table 44 - Number of EPA Assessments by Category

Table 45 - Number of State Cost Estimates Differing from EPA Estimates.

Table 46 - Percent of State Needs by Basis of Cost Estimate.

Table 47 - Percent of National Needs by Basis of Cost Estimate.

FEBRUARY 10, 1981
TABLE 1

1980 NEEDS SURVEY

EPA ASSESSMENTS FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1980 DOLLARS

CATEGORIES I THRU V

	TOTAL	I	IIA	IIB	III A	III B	IV A	IV B	V
ALABAMA	903	262	35	11	78	5	288	222	0
ALASKA	507	318	0	0	24	0	42	105	15
ARIZONA	606	279	0	0	0	0	128	197	0
ARKANSAS	696	286	9	7	27	2	126	115	0
CALIFORNIA	6,773	2,636	78	78	51	170	1,287	1,964	522
COLORADO	1,006	367	60	0	10	109	21	286	80
CONNECTICUT	1,734	315	44	9	11	14	403	199	657
DELAWARE	499	95	41	0	3	1	33	90	233
DIST. OF COLUMBIA	442	8	0	0	15	0	0	0	418
FLORIDA	4,907	1,378	223	178	89	0	1,311	1,719	6
GEORGIA	1,679	440	103	6	88	8	247	439	385
HAWAII	818	252	6	8	0	0	260	298	0
IDAHO	509	162	41	4	16	0	102	93	88
ILLINOIS	4,529	621	969	1	101	9	179	333	2,232
INDIANA	4,027	276	188	60	41	19	304	208	2,926
IOWA	1,259	463	56	0	98	1	112	232	295
KANSAS	1,134	336	5	0	55	19	188	207	301
KENTUCKY	2,489	439	90	0	87	8	512	407	822
LOUISIANA	1,148	431	6	1	52	11	314	331	0
MAINE	1,524	183	0	2	12	6	286	159	983
MARYLAND	3,031	334	48	338	10	1,619	226	371	80
MASSACHUSETTS	4,719	965	46	17	12	108	852	634	2,082
MICHIGAN	4,953	1,421	75	42	60	76	731	603	1,866
MINNESOTA	1,553	325	262	32	37	28	154	391	320
MISSISSIPPI	844	338	56	1	110	0	104	231	0
MISSOURI	2,752	964	0	0	41	32	227	672	813
MONTANA	252	47	12	0	1	0	13	36	141
NEBRASKA	362	188	0	0	0	1	20	65	85
NEVADA	242	95	31	35	2	2	39	34	0
NEW HAMPSHIRE	1,295	261	4	8	8	5	277	307	422
NEW JERSEY	6,666	1,744	93	104	106	1	748	852	2,013
NEW MEXICO	194	113	0	0	0	0	36	43	0
NEW YORK	18,331	3,394	70	27	97	3,359	2,313	1,583	7,495
NORTH CAROLINA	1,740	528	106	76	85	0	414	523	5
NORTH DAKOTA	86	37	0	0	0	0	2	14	31
OHIO	6,373	913	401	242	223	11	714	829	3,036
OKLAHOMA	624	250	32	0	39	24	139	137	0
OREGON	1,252	181	105	6	43	50	271	319	273
PENNSYLVANIA	7,785	1,256	199	33	15	0	1,295	584	4,398
RHODE ISLAND	979	157	30	0	2	26	288	113	360
SOUTH CAROLINA	871	240	20	1	60	0	250	296	0
SOUTH DAKOTA	252	114	25	10	4	1	3	26	67
TENNESSEE	1,654	486	131	15	134	0	408	453	226
TEXAS	4,392	1,432	97	57	175	105	663	1,037	22
UTAH	400	132	115	0	32	0	55	61	4
VERMONT	445	95	10	1	2	5	70	40	218
VIRGINIA	1,969	654	21	17	16	14	334	470	441
WASHINGTON	3,125	786	121	0	97	74	499	698	847
WEST VIRGINIA	1,046	362	10	0	1	2	509	171	807
WISCONSIN	2,271	899	101	0	98	15	257	511	388
WYOMING	150	82	10	0	6	0	0	35	15
AMERICAN SAMOA	58	22	0	0	0	0	10	28	0
GUAM	24	19	0	0	0	0	0	4	0
MARIANAS GROUP	62	16	0	0	0	0	20	25	0
PUERTO RICO	1,185	407	6	0	17	11	377	336	28
PAC. TR. TERR.	109	53	0	0	0	0	36	19	0
VIRGIN ISLANDS	47	18	0	0	0	0	15	13	0
U.S. TOTALS	119,898	28,844	4,206	1,430	2,497	5,969	18,452	21,330	37,165

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

FEBRUARY 10, 1981
TABLE 2

1980 NEEDS SURVEY

STATE ESTIMATES FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1980 DOLLARS

CATEGORIES I THRU V

	TOTAL	I	IIA	IIB	III A	III B	IV A	IV B	V
ALABAMA	903	262	35	11	78	3	288	222	0
ALASKA	507	316	0	0	24	0	42	105	15
ARIZONA	792	368	0	0	0	0	131	291	0
ARKANSAS	496	206	9	7	27	2	126	115	0
CALIFORNIA	7,050	2,911	70	70	51	170	1,287	1,965	522
COLORADO	1,006	367	60	0	10	109	21	356	80
CONNECTICUT	1,734	315	44	9	11	14	483	199	657
DELAWARE	499	95	41	0	3	1	33	90	233
DIST. OF COLUMBIA	442	8	0	0	15	0	0	0	418
FLORIDA	4,907	1,378	223	178	89	0	1,311	1,719	6
GEORGIA	1,679	460	103	6	88	8	247	439	325
HAWAII	818	252	6	0	0	0	260	298	0
IDAHO	509	162	41	4	16	0	102	93	88
ILLINOIS	4,529	621	969	1	181	9	179	333	2,232
INDIANA	4,026	276	188	60	40	19	304	208	2,926
IOWA	1,259	463	56	0	98	1	112	232	295
KANSAS	1,134	336	5	0	55	19	108	307	301
KENTUCKY	2,450	439	90	0	87	8	512	497	822
LOUISIANA	1,148	431	6	1	52	11	314	331	0
MAINE	1,524	183	0	2	12	6	206	159	953
MARYLAND	3,031	334	48	338	10	1,619	226	371	80
MASSACHUSETTS	4,719	965	46	17	12	108	852	634	2,082
MICHIGAN	4,953	1,421	75	42	60	76	731	683	1,060
MINNESOTA	1,553	325	262	32	37	28	154	391	320
MISSISSIPPI	844	338	56	1	110	0	104	231	0
MISSOURI	2,752	964	0	0	41	32	227	672	813
MONTANA	252	47	12	0	1	0	13	36	141
NEBRASKA	362	188	0	0	0	1	20	65	85
NEVADA	242	95	31	35	2	2	39	38	0
NEW HAMPSHIRE	1,295	261	4	8	6	5	277	307	422
NEW JERSEY	6,466	1,744	93	104	106	1	748	852	2,813
NEW MEXICO	194	113	0	0	0	0	36	43	0
NEW YORK	18,536	3,426	70	27	97	3,359	2,396	1,673	7,485
NORTH CAROLINA	1,740	528	106	76	85	0	414	523	5
NORTH DAKOTA	86	37	0	0	0	0	2	16	31
OHIO	6,373	913	401	262	223	11	714	829	3,036
OKLAHOMA	624	250	32	0	39	24	139	137	0
OREGON	1,252	181	115	6	43	50	271	319	273
PENNSYLVANIA	7,785	1,256	199	33	15	0	1,295	584	4,398
RHODE ISLAND	979	157	30	0	2	26	280	113	368
SOUTH CAROLINA	871	240	20	1	60	0	250	296	0
SOUTH DAKOTA	252	114	25	10	4	1	3	26	67
TENNESSEE	1,654	486	131	15	134	0	408	453	224
TEXAS	4,410	1,450	97	57	175	105	663	1,037	22
UTAH	480	132	115	0	32	0	55	61	4
VERMONT	445	95	10	1	2	5	70	40	218
VIRGINIA	1,969	654	21	17	16	14	334	470	441
WASHINGTON	3,125	786	121	0	97	74	499	698	847
WEST VIRGINIA	1,866	362	10	0	1	2	509	171	807
WISCONSIN	2,464	899	101	0	98	15	257	511	581
WYOMING	159	86	10	0	6	0	0	39	15
AMERICAN SAMOA	58	22	0	0	0	0	10	25	0
GUAM	39	19	0	0	0	0	7	12	0
MARIANAS GROUP	62	16	0	0	0	0	20	25	0
PUERTO RICO	1,185	407	6	0	17	11	377	336	28
PAC. TR. TERR.	109	53	0	0	0	0	36	19	0
VIRGIN ISLANDS	47	18	0	0	0	0	15	13	0
U.S. TOTALS	120,800	29,263	4,206	1,430	2,497	5,969	18,546	21,927	37,389

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

FEBRUARY 10, 1981
TABLE 3

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1980 DOLLARS
CATEGORIES I THROUGH V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	1,165,271	903,496	-261,775	0.8924	0.7535	-0.1389
ALASKA	634,402	507,011	-127,391	0.4856	0.4228	-0.0630
ARIZONA	630,833	606,735	-24,098	0.4831	0.5060	+0.0228
ARKANSAS	617,372	496,013	-121,359	0.4728	0.4136	-0.0591
CALIFORNIA	9,890,979	6,773,865	-3,117,114	7.5753	5.6496	-1.9256
COLORADO	1,167,056	1,006,726	-160,330	0.8936	0.8396	-0.0541
CONNECTICUT	1,701,168	1,734,961	+33,793	1.3028	1.4470	+0.1441
DELAWARE	478,848	499,924	+21,076	0.3667	0.4169	+0.0502
DIST. OF COLUMBIA	228,874	442,177	+213,303	0.1752	0.3687	+0.1935
FLORIDA	6,121,125	4,907,266	-1,213,859	4.6880	4.0928	-0.5952
GEORGIA	2,159,871	1,679,808	-480,063	1.6542	1.4010	-0.2531
HAWAII	1,056,785	818,167	-238,618	0.8093	0.6823	-0.1269
IDAHO	549,367	509,662	-39,705	0.4207	0.4250	+0.0043
ILLINOIS	5,050,175	4,529,845	-520,330	3.8678	3.7780	-0.0897
INDIANA	5,172,940	4,027,278	-1,145,662	3.9618	3.3588	-0.6029
IOWA	1,348,799	1,259,891	-88,908	1.0330	1.0507	+0.0177
KANSAS	1,356,918	1,134,664	-222,254	1.0392	0.9463	-0.0928
KENTUCKY	2,565,021	2,459,498	-105,523	1.9644	2.0513	+0.0868
LOUISIANA	1,398,352	1,148,708	-249,644	1.0709	0.9580	-0.1129
MAINE	2,015,767	1,524,071	-491,696	1.5438	1.2711	-0.2727
MARYLAND	3,579,498	3,031,450	-548,048	2.7414	2.5283	-0.2131
MASSACHUSETTS	4,215,140	4,719,162	+504,022	3.2282	3.9359	+0.7076
MICHIGAN	5,516,953	4,953,325	-563,628	4.2253	4.1312	-0.0940
MINNESOTA	1,657,660	1,553,304	-104,356	1.2695	1.2955	+0.0259
MISSISSIPPI	953,208	844,128	-109,080	0.7300	0.7040	-0.0260
MISSOURI	3,118,445	2,752,925	-365,520	2.3883	2.2960	-0.0923
MONTANA	154,961	252,659	+97,698	0.1186	0.2107	+0.0920
NEBRASKA	390,745	362,162	-28,583	0.2992	0.3020	+0.0027
NEVADA	319,893	242,082	-77,811	0.2449	0.2019	-0.0430
NEW HAMPSHIRE	1,420,292	1,295,642	-124,650	1.0877	1.0806	-0.0071
NEW JERSEY	5,161,537	6,466,107	+1,304,570	3.9531	5.3929	+1.4398
NEW MEXICO	195,262	194,282	-980	0.1495	0.1620	+0.0124
NEW YORK	17,412,653	18,331,095	+918,642	13.3358	15.2887	+1.9529
NORTH CAROLINA	2,039,306	1,740,928	-298,378	1.5618	1.4519	-0.1098
NORTH DAKOTA	101,290	86,112	-15,178	0.0775	0.0718	-0.0057
OHIO	8,336,874	6,373,463	-1,963,411	6.3850	5.3156	-1.0693
OKLAHOMA	703,682	624,012	-79,670	0.5389	0.5204	-0.0184
OREGON	1,889,402	1,252,273	-637,129	1.4470	1.0444	-0.4026
PENNSYLVANIA	6,590,895	7,785,484	+1,194,589	5.0478	6.4933	+1.4455
RHODE ISLAND	1,163,296	979,175	-184,121	0.8909	0.8166	-0.0742
SOUTH CAROLINA	1,033,659	871,222	-162,437	0.7916	0.7266	-0.0650
SOUTH DAKOTA	254,657	252,492	-2,165	0.1950	0.2105	+0.0155
TENNESSEE	2,162,157	1,854,601	-307,556	1.6559	1.5468	-0.1091
TEXAS	3,826,209	4,392,816	+566,607	2.9304	3.6637	+0.7333
UTAH	491,253	400,203	-91,050	0.3762	0.3337	-0.0424
VERMONT	567,013	445,605	-121,408	0.4342	0.3716	-0.0626
VIRGINIA	2,470,637	1,969,986	-500,651	1.8922	1.6430	-0.2491
WASHINGTON	3,396,401	3,125,975	-270,426	2.6012	2.6071	+0.0059
WEST VIRGINIA	2,270,450	1,866,573	-403,877	1.7388	1.5567	-0.1821
WISCONSIN	2,211,039	2,271,348	+60,309	1.6933	1.8943	+0.2009
WYOMING	92,363	150,991	+58,628	0.0707	0.1259	+0.0551
AMERICAN SAMOA	70,499	58,234	-12,265	0.0539	0.0485	-0.0054
GUAM	55,174	24,448	-30,726	0.0422	0.0203	-0.0218
MARIANAS GROUP	69,275	62,347	-6,928	0.0530	0.0519	-0.0010
PUERTO RICO	1,201,960	1,185,302	-16,658	0.9205	0.9885	+0.0680
PAC. TR. TERR.	111,052	109,931	-1,121	0.0850	0.0916	+0.0066
VIRGIN ISLANDS	54,265	47,344	-6,921	0.0415	0.0394	-0.0020
U.S. TOTALS	130,568,778	119,898,954	-10,669,824	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1980 DOLLARS
CATS I, IIA, AND IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	425,652	309,747	-115,905	0.9721	0.8982	-0.0738
ALASKA	417,744	318,056	-99,688	0.9540	0.9223	-0.0316
ARIZONA	236,405	279,128	+42,723	0.5399	0.8094	+0.2695
ARKANSAS	291,377	223,920	-67,457	0.6654	0.6493	-0.0160
CALIFORNIA	5,746,056	2,777,612	-2,968,444	13.1232	8.0551	-5.0680
COLORADO	680,042	428,466	-251,576	1.5531	1.2425	-0.3105
CONNECTICUT	426,198	369,480	-56,718	0.9733	1.0715	+0.0982
DELAWARE	116,693	136,970	+20,277	0.2665	0.3972	+0.1307
DIST. OF COLUMBIA	18,949	8,049	-10,900	0.0432	0.0233	-0.0198
FLORIDA	2,305,175	1,781,143	-524,032	5.2647	5.1653	-0.0993
GEORGIA	822,118	570,609	-251,509	1.8776	1.6547	-0.2228
HAWAII	419,845	259,148	-160,697	0.9588	0.7515	-0.2072
IDAHO	218,376	208,563	-9,813	0.4987	0.6048	+0.1061
ILLINOIS	1,697,864	1,592,211	-105,653	3.8776	4.6174	+0.7398
INDIANA	716,759	526,652	-190,107	1.6369	1.5273	-0.1095
IOWA	612,438	520,249	-92,189	1.3987	1.5087	+0.1100
KANSAS	513,528	342,081	-171,447	1.1728	0.9920	-0.1807
KENTUCKY	562,506	530,879	-31,627	1.2846	1.5395	+0.2549
LOUISIANA	569,598	439,259	-130,339	1.3008	1.2738	-0.0269
MAINE	176,887	185,650	+8,763	0.4039	0.5383	+0.1344
MARYLAND	1,062,402	721,636	-340,766	2.4263	2.0927	-0.3335
MASSACHUSETTS	1,263,276	1,029,097	-234,179	2.8851	2.9844	+0.0993
MICHIGAN	1,411,517	1,539,976	+128,459	3.2237	4.4659	+1.2422
MINNESOTA	883,497	620,924	-262,573	2.0177	1.8007	-0.2169
MISSISSIPPI	388,836	396,813	+7,977	0.8880	1.1507	+0.2627
MISSOURI	987,856	965,935	-21,921	2.2561	2.8012	+0.5451
MONTANA	54,640	59,286	+4,646	0.1247	0.1719	+0.0472
NEBRASKA	200,259	188,828	-11,431	0.4573	0.5476	+0.0903
NEVADA	229,692	162,310	-67,382	0.5245	0.4707	-0.0537
NEW HAMPSHIRE	360,491	274,729	-85,762	0.8233	0.7967	-0.0265
NEW JERSEY	2,202,308	1,942,991	-259,317	5.0297	5.6347	+0.6050
NEW MEXICO	100,971	114,234	+13,263	0.2306	0.3312	+0.1006
NEW YORK	4,531,795	3,492,629	-1,039,166	10.3499	10.1287	-0.2211
NORTH CAROLINA	744,456	711,259	-33,197	1.7002	2.0626	+0.3624
NORTH DAKOTA	59,258	37,668	-21,590	0.1353	0.1092	-0.0260
OHIO	2,143,929	1,557,297	-586,632	4.8964	4.5162	-0.3801
OKLAHOMA	302,771	283,098	-19,673	0.6914	0.8209	+0.1295
OREGON	523,396	293,926	-229,470	1.1953	0.8523	-0.3429
PENNSYLVANIA	2,014,942	1,489,517	-525,425	4.6018	4.3196	-0.2821
RHODE ISLAND	297,518	188,193	-109,325	0.6794	0.5457	-0.1336
SOUTH CAROLINA	273,111	262,679	-10,432	0.6237	0.7617	+0.1380
SOUTH DAKOTA	176,072	150,135	-25,937	0.4021	0.4353	+0.0332
TENNESSEE	684,566	633,455	-51,111	1.5634	1.8370	+0.2736
TEXAS	1,500,434	1,588,131	+47,697	3.4267	4.6056	+1.1789
UTAH	291,863	247,631	-44,232	0.6665	0.7181	+0.0516
VERMONT	159,942	108,369	-51,573	0.3652	0.3142	-0.0509
VIRGINIA	945,277	693,293	-251,984	2.1588	2.0105	-0.1482
WASHINGTON	962,631	908,086	-54,545	2.1985	2.6334	+0.4349
WEST VIRGINIA	473,580	373,848	-99,732	1.0815	1.0841	+0.0026
WISCONSIN	906,225	1,000,350	+94,125	2.0694	2.9010	+0.8314
WYOMING	65,408	92,857	+27,449	0.1493	0.2692	+0.1199
AMERICAN SAMOA	28,159	22,674	-5,485	0.0643	0.0657	+0.0014
GUAM	48,579	19,102	-29,477	0.1109	0.0553	-0.0555
MARIANAS GROUP	21,315	16,634	-4,681	0.0486	0.0482	-0.0003
PUERTO RICO	438,598	414,114	-24,484	1.0016	1.2009	+0.1993
PAC. TR. TERR.	51,490	53,873	+2,383	0.1175	0.1562	+0.0387
VIRGIN ISLANDS	20,202	18,784	-1,418	0.0461	0.0544	+0.0083
U.S. TOTALS	43,785,472	34,482,233	-9,303,239	100.0000	100.0000	+0.0000

FEBRUARY 16, 1981
TABLE 9

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1980 DOLLARS
CAT I, IIA, IIB, AND IVB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	647,872	532,702	-115,170	0.9741	0.9544	-0.0196
ALASKA	534,804	423,841	-110,963	0.8040	0.7593	-0.0446
ARIZONA	482,144	476,862	-5,282	0.7249	0.8543	+0.1294
ARKANSAS	413,319	339,167	-74,152	0.6214	0.6076	-0.0137
CALIFORNIA	7,747,814	4,741,632	-3,006,182	11.6491	8.4955	-3.1535
COLORADO	1,007,298	785,320	-221,978	1.5145	1.4070	-0.1074
CONNECTICUT	650,575	568,505	-82,070	0.9781	1.0185	+0.0404
DELAWARE	264,853	227,410	-37,443	0.3982	0.4074	+0.0092
DIST. OF COLUMBIA	18,949	8,049	-10,900	0.0284	0.0144	-0.0139
FLORIDA	4,103,855	3,500,258	-603,597	6.1703	6.2713	+0.1010
GEORGIA	1,327,044	1,010,348	-316,696	1.9952	1.8102	-0.1849
HAWAII	813,131	557,165	-255,966	1.2225	0.9982	-0.2242
IDAHO	322,372	301,612	-20,760	0.4846	0.5403	+0.0557
ILLINOIS	2,045,168	1,925,714	-119,454	3.0749	3.4502	+0.3753
INDIANA	1,099,729	735,546	-364,183	1.6534	1.3178	-0.3355
IOWA	860,870	752,639	-108,231	1.2943	1.3484	+0.0541
KANSAS	870,022	649,169	-220,853	1.3081	1.1631	-0.1449
KENTUCKY	1,037,190	1,028,816	-8,374	1.5594	1.8433	+0.2839
LOUISIANA	932,065	771,110	-160,955	1.4013	1.3815	-0.0197
MAINE	367,826	344,744	-22,282	0.5510	0.6176	+0.0658
MARYLAND	1,459,771	1,093,495	-366,276	2.1948	1.9592	-0.2355
MASSACHUSETTS	1,931,202	1,663,501	-267,701	2.9036	2.9804	+0.0768
MICHIGAN	2,237,460	2,223,052	-14,408	3.3641	3.9830	+0.6189
MINNESOTA	1,188,530	1,012,516	-176,014	1.7870	1.8141	+0.0271
MISSISSIPPI	596,683	628,659	+31,976	0.8971	1.1263	+0.2292
MISSOURI	1,822,157	1,638,052	-184,105	2.7396	2.9348	+0.1952
MONTANA	79,674	95,676	+16,002	0.1197	0.1714	+0.0517
NEBRASKA	262,254	254,763	-7,491	0.3943	0.4564	+0.0621
NEVADA	270,802	197,052	-73,750	0.4071	0.3530	-0.0540
NEW HAMPSHIRE	724,354	582,077	-142,277	1.0890	1.0429	-0.0460
NEW JERSEY	2,942,077	2,795,881	-146,196	4.4235	5.0093	+0.5858
NEW MEXICO	141,131	157,417	+16,286	0.2121	0.2820	+0.0699
NEW YORK	6,824,329	5,076,384	-1,747,945	10.2606	9.0953	-1.1652
NORTH CAROLINA	1,283,672	1,234,538	-49,134	1.9300	2.2119	+0.2819
NORTH DAKOTA	77,497	51,835	-25,662	0.1165	0.0928	-0.0236
OHIO	3,158,922	2,386,889	-772,033	4.7495	4.2765	-0.4729
OKLAHOMA	461,572	420,602	-40,970	0.6939	0.7535	+0.0596
OREGON	893,699	613,360	-280,339	1.3437	1.0989	-0.2447
PENNSYLVANIA	2,665,771	2,074,233	-591,538	4.0080	3.7163	-0.2916
RHODE ISLAND	421,302	301,374	-119,928	0.6334	0.5399	-0.0934
SOUTH CAROLINA	582,748	559,584	-23,164	0.8761	1.0026	+0.1265
SOUTH DAKOTA	212,724	176,250	-36,474	0.3198	0.3157	-0.0040
TENNESSEE	1,134,549	1,086,603	-47,946	1.7058	1.9468	+0.2410
TEXAS	2,733,344	3,425,780	+692,436	4.1096	6.1379	+2.0283
UTAH	362,907	308,888	-54,019	0.5456	0.5534	+0.0078
VERMONT	198,391	148,519	-49,872	0.2982	0.2661	-0.0320
VIRGINIA	1,578,752	1,163,432	-415,320	2.3737	2.0845	-0.2891
WASHINGTON	1,554,598	1,646,794	+92,196	2.3374	2.9780	+0.5814
WEST VIRGINIA	706,776	545,738	-161,038	1.0626	0.9777	-0.0848
WISCONSIN	1,277,673	1,511,176	+233,703	1.9210	2.7079	+0.7869
WYOMING	77,271	128,120	+50,849	0.1161	0.2295	+0.1134
AMERICAN SAMOA	57,420	48,146	-9,274	0.0863	0.0862	+0.0000
GUAM	53,216	23,724	-29,492	0.0800	0.0425	-0.0376
MARIANAS GROUP	47,145	42,182	-4,963	0.0708	0.0755	+0.0047
PUERTO RICO	832,231	750,392	-81,839	1.2512	1.3444	+0.0932
PAC. TR. TERR.	70,729	73,770	+3,041	0.1063	0.1321	+0.0258
VIRGIN ISLANDS	40,222	31,905	-8,317	0.0604	0.0571	-0.0032
U.S. TOTALS	66,509,655	55,813,168	-10,696,487	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 6

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR IMPROVEMENT OF TREATMENT PLANTS TO ACHIEVE SECONDARY LEVEL
THOUSANDS OF 1980 DOLLARS
CATEGORY I

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	185,607	262,849	+77,242	0.9999	0.9112	-0.0887
ALASKA	410,401	318,056	-92,345	2.2111	1.1026	-1.1084
ARIZONA	224,376	279,069	+54,693	1.2088	0.9674	-0.2413
ARKANSAS	80,164	206,081	+125,917	0.4318	0.7144	+0.2825
CALIFORNIA	3,310,953	2,636,620	-674,333	17.8384	9.1407	-8.6977
COLORADO	291,089	367,913	+76,824	1.5682	1.2754	-0.2928
CONNECTICUT	254,697	315,328	+60,631	1.3722	1.0931	-0.2790
DELAWARE	704	95,914	+95,210	0.0037	0.3325	+0.3287
DIST. OF COLUMBIA	0	8,049	+8,049	0.0000	0.0278	+0.0278
FLORIDA	575,942	1,378,567	+802,625	3.1029	4.7792	+1.6762
GEORGIA	155,809	460,992	+305,183	0.8394	1.5981	+0.7587
HAWAII	406,227	252,171	-154,056	2.1886	0.8742	-1.3143
IDAHO	97,475	162,878	+65,403	0.5251	0.5646	+0.0395
ILLINOIS	106,649	621,655	+515,006	0.5745	2.1551	+1.5805
INDIANA	56,995	276,971	+219,976	0.3070	0.9602	+0.6531
IOWA	223,586	463,474	+239,888	1.2046	1.6067	+0.4021
KANSAS	361,869	336,411	-25,458	1.9496	1.1662	-0.7833
KENTUCKY	103,559	439,789	+336,230	0.5579	1.5246	+0.9667
LOUISIANA	498,707	431,893	-66,814	2.6868	1.4972	-1.1895
MAINE	149,181	183,004	+33,823	0.8037	0.6344	-0.1692
MARYLAND	25,243	334,655	+309,412	0.1359	1.1601	+1.0241
MASSACHUSETTS	956,578	965,117	+10,539	5.1429	3.3458	-1.7970
MICHIGAN	210,712	1,421,472	+1,210,760	1.1352	4.9279	+3.7927
MINNESOTA	15,478	325,902	+310,424	0.0833	1.1298	+1.0466
MISSISSIPPI	68,627	338,057	+269,430	0.3697	1.1719	+0.8022
MISSOURI	958,868	964,701	+5,833	5.1660	3.3448	-1.8216
MONTANA	46,708	47,048	+340	0.2516	0.1630	-0.0885
NEBRASKA	196,736	188,828	-7,908	1.0599	0.6546	-0.4053
NEVADA	80,123	95,196	+15,073	0.4316	0.3300	-0.1016
NEW HAMPSHIRE	243,473	261,354	+17,881	1.3117	0.9060	-0.4056
NEW JERSEY	1,136,908	1,744,714	+607,806	6.1253	6.0486	-0.0766
NEW MEXICO	76,363	113,352	+36,989	0.4114	0.3929	-0.0184
NEW YORK	2,943,560	3,394,414	+450,854	15.8590	11.7678	-4.0911
NORTH CAROLINA	183,294	528,288	+344,994	0.9875	1.8314	+0.8439
NORTH DAKOTA	59,258	37,668	-21,590	0.3192	0.1305	-0.1886
OHIO	106,003	913,912	+807,909	0.5711	3.1683	+2.5972
OKLAHOMA	41,174	250,762	+209,588	0.2218	0.8693	+0.6475
OREGON	26,964	181,483	+154,519	0.1452	0.6291	+0.4838
PENNSYLVANIA	622,580	1,256,350	+633,770	3.3542	4.3555	+1.0012
RHODE ISLAND	178,278	157,698	-20,580	0.9604	0.5466	-0.4137
SOUTH CAROLINA	194,855	240,340	+45,485	1.0498	0.8332	-0.2166
SOUTH DAKOTA	53,263	114,800	+61,537	0.2869	0.3979	+0.1110
TENNESSEE	207,764	486,106	+278,342	1.1193	1.6852	+0.5658
TEXAS	6,006	1,432,636	+1,426,632	0.0323	4.9666	+4.9343
UTAH	8,518	132,388	+123,870	0.0458	0.4589	+0.4130
VERMONT	54,383	95,769	+41,386	0.2929	0.3320	+0.0390
VIRGINIA	540,842	654,703	+113,861	2.9138	2.2697	-0.6441
WASHINGTON	726,059	786,427	+60,368	3.9117	2.7263	-1.1853
WEST VIRGINIA	334,274	362,784	+28,510	1.8009	1.2577	-0.5432
WISCONSIN	123,180	899,013	+775,833	0.6636	3.1167	+2.4530
WYOMING	60,554	82,301	+21,747	0.3262	0.2853	-0.0409
AMERICAN SAMOA	28,159	22,674	-5,485	0.1517	0.0785	-0.0731
GUAM	47,142	19,102	-28,040	0.2539	0.0662	-0.1877
MARIANAS GROUP	21,315	16,634	-4,681	0.1148	0.0576	-0.0571
PUERTO RICO	413,871	407,810	-6,061	2.2298	1.4137	-0.8160
PAC. TR. TERR.	51,490	53,873	+2,383	0.2774	0.1867	-0.0906
VIRGIN ISLANDS	20,202	18,784	-1,418	0.1088	0.0651	-0.0437
U.S. TOTALS	18,560,785	28,844,791	+10,284,006	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
TO ACHIEVE MORE STRINGENT TREATMENT LEVELS
THOUSANDS OF 1980 DOLLARS
CAT IIA, S B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	240,065	46,898	-193,167	0.9516	0.8318	-0.1196
ALASKA	7,343	0	-7,343	0.0291	0.0000	-0.0290
ARIZONA	12,029	59	-11,970	0.0476	0.0010	-0.0465
ARKANSAS	211,213	17,839	-193,374	0.8373	0.3164	-0.5208
CALIFORNIA	2,435,103	140,992	-2,294,111	9.6536	2.5009	-7.1526
COLORADO	388,953	60,553	-328,400	1.5419	1.0741	-0.4677
CONNECTICUT	171,501	54,152	-117,349	0.6798	0.9605	+0.2807
DELAWARE	115,989	41,056	-74,933	0.4598	0.7282	+0.2684
DIST. OF COLUMBIA	10,949	0	-10,949	0.0751	0.0000	-0.0750
FLORIDA	1,729,233	402,576	-1,326,657	6.8553	7.1411	+0.2858
GEORGIA	666,309	109,617	-556,692	2.6414	1.9444	-0.6969
HAWAII	13,618	6,977	-6,641	0.0539	0.1237	+0.0698
IDAHO	120,901	45,685	-75,216	0.4792	0.8103	+0.3311
ILLINOIS	1,591,215	970,556	-620,659	6.3081	17.2162	+10.9081
INDIANA	659,764	249,681	-410,083	2.6155	4.4289	+1.8134
IOWA	388,852	56,775	-332,077	1.5415	1.0070	-0.5343
KANSAS	151,659	5,670	-145,989	0.6012	0.1005	-0.5006
KENTUCKY	458,947	91,090	-367,857	1.8196	1.6157	-0.2039
LOUISIANA	79,891	7,366	-63,525	0.2810	0.1306	-0.1503
MAINE	27,706	2,646	-25,060	0.1098	0.0469	-0.0628
MARYLAND	1,037,159	386,981	-650,178	4.1116	6.8644	+2.7528
MASSACHUSETTS	388,698	63,980	-244,718	1.2237	1.1349	-0.0887
MICHIGAN	1,200,805	118,504	-1,082,301	4.7604	2.1020	-2.6583
MINNESOTA	868,019	295,022	-572,997	3.4411	5.2332	+1.7921
MISSISSIPPI	320,209	58,736	-261,453	1.2698	1.0422	-0.2271
MISSOURI	28,988	1,234	-27,754	0.1149	0.0218	-0.0930
MONTANA	7,932	12,238	+4,306	0.0314	0.2170	+0.1856
NEBRASKA	3,523	0	-3,523	0.0139	0.0000	-0.0138
NEVADA	149,569	67,114	-82,455	0.5929	1.1904	+0.5975
NEW HAMPSHIRE	117,018	13,375	-103,643	0.4639	0.2372	-0.2266
NEW JERSEY	1,069,400	198,277	-867,123	4.2236	3.5171	-0.7064
NEW MEXICO	24,668	882	-23,726	0.0975	0.0156	-0.0818
NEW YORK	1,588,235	98,215	-1,490,020	6.2963	1.7421	-4.5541
NORTH CAROLINA	561,162	102,971	-378,191	2.2246	1.8256	+1.0210
NORTH DAKOTA	0	0	+0	0.0000	0.0000	+0.0000
OHIO	2,037,926	643,385	-1,394,541	8.0790	11.4127	+3.3337
OKLAHOMA	261,597	32,336	-229,261	1.0370	0.5735	-0.4636
OREGON	496,432	112,443	-383,989	1.9680	1.9945	+0.0265
PENNSYLVANIA	1,302,362	233,167	-1,199,195	5.5198	4.1360	-1.3837
RHODE ISLAND	119,248	30,503	-88,745	0.4727	0.5410	+0.0683
SOUTH CAROLINA	78,256	22,339	-55,917	0.3102	0.3962	+0.0860
SOUTH DAKOTA	122,809	35,335	-87,474	0.4868	0.6267	+0.1399
TENNESSEE	476,802	147,349	-329,453	1.8902	2.6137	+0.7235
TEXAS	1,498,430	155,495	-1,343,935	5.9244	2.7582	-3.1661
UTAH	283,345	115,243	-168,102	1.1232	2.0442	+0.9210
VERMONT	105,959	12,600	-92,959	0.4186	0.2234	-0.1948
VIRGINIA	404,635	38,590	-365,845	1.6033	0.6845	-0.9187
WASHINGTON	236,572	121,699	-114,913	0.9378	2.1580	+1.2202
WEST VIRGINIA	139,306	11,064	-128,242	0.5522	0.1962	-0.3559
WISCONSIN	703,085	101,337	-601,708	3.1842	1.7975	-1.3866
WYOMING	4,854	10,556	+5,702	0.0192	0.1872	+0.1680
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	1,437	0	-1,437	0.0056	0.0000	-0.0055
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	24,727	6,304	-18,423	0.0980	0.1118	+0.0138
PAC. TR. TERR. VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	25,224,687	5,637,442	-19,587,245	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 8

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1980 DOLLARS
CATEGORY III A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	106,565	78,489	-28,076	3.5544	3.1421	-0.4122
ALASKA	37,833	24,660	-13,173	1.2619	0.9872	-0.2746
ARIZONA	1,782	820	-962	0.0594	0.0328	-0.0265
ARKANSAS	36,732	27,740	-8,992	1.2252	1.1105	-0.1146
CALIFORNIA	92,537	51,828	-40,709	3.0865	2.0748	-1.0116
COLORADO	12,408	10,371	-2,037	0.4138	0.4151	+0.0013
CONNECTICUT	38,421	11,669	-26,752	1.2815	0.4671	-0.8143
DELAWARE	3,419	3,582	+163	0.1140	0.1433	+0.0293
DIST. OF COLUMBIA	0	15,168	+15,168	0.0000	0.6072	+0.6072
FLORIDA	87,285	89,475	+2,190	2.9114	3.5819	+0.6705
GEORGIA	96,275	88,352	-7,923	3.2112	3.5369	+0.3257
HAWAII	33	15	-18	0.0011	0.0005	-0.0004
IDAHO	17,992	16,676	-1,316	0.6001	0.6675	+0.0674
ILLINOIS	177,873	181,955	+4,082	5.9329	7.2841	+1.3512
INDIANA	44,883	41,258	-3,625	1.4970	1.6516	+0.1546
IOWA	98,775	98,295	-480	3.2946	3.9350	+0.6404
KANSAS	59,181	55,639	-3,542	1.9739	2.2273	+0.2534
KENTUCKY	91,241	87,151	-4,090	3.0433	3.4889	+0.4456
LOUISIANA	56,389	52,075	-4,314	1.8808	2.0847	+0.2039
MAINE	14,694	12,854	-3,840	0.5568	0.5145	-0.0422
MARYLAND	8,917	10,965	+2,048	0.2974	0.4389	+0.1415
MASSACHUSETTS	4,707	12,593	+7,886	0.1570	0.5041	+0.3471
MICHIGAN	53,947	60,598	+6,651	1.7994	2.4259	+0.6265
MINNESOTA	34,565	37,096	+2,531	1.1529	1.4850	+0.3321
MISSISSIPPI	121,258	110,920	-10,338	4.0445	4.4404	+0.3959
MISSOURI	73,595	41,751	-31,844	2.4547	1.6714	-0.7832
MONTANA	3,330	1,565	-1,765	0.1110	0.0626	-0.0483
NEBRASKA	1,317	954	-363	0.0439	0.0381	-0.0057
NEVADA	1,648	2,367	+719	0.0549	0.0947	+0.0398
NEW HAMPSHIRE	8,387	8,417	+30	0.2797	0.3369	+0.0572
NEW JERSEY	169,314	106,574	-62,740	5.6474	4.2664	-1.3809
NEW MEXICO	120	0	-120	0.0040	0.0000	-0.0039
NEW YORK	127,864	97,095	-30,769	4.2649	3.8869	-0.3778
NORTH CAROLINA	82,468	85,715	+3,255	2.7504	3.4314	+0.6810
NORTH DAKOTA	632	502	-130	0.0210	0.0200	-0.0009
OHIO	315,439	223,949	-91,490	10.5215	8.9653	-1.5561
OKLAHOMA	46,838	19,333	-5,505	1.4955	1.5746	+0.0791
OREGON	63,196	43,549	-19,647	2.1079	1.7433	-0.3645
PENNSYLVANIA	12,744	15,658	+2,894	0.4251	0.6268	+0.2011
RHODE ISLAND	13,035	2,416	-10,619	0.4347	0.0967	-0.3379
SOUTH CAROLINA	63,940	60,851	-3,089	2.1327	2.4360	+0.3033
SOUTH DAKOTA	3,863	4,340	+477	0.1288	0.1737	+0.0449
TENNESSEE	153,331	134,717	-18,614	5.1143	5.3931	+0.2788
TEXAS	264,395	175,341	-89,054	8.8189	7.0194	-1.7994
UTAH	50,047	32,067	-17,980	1.6693	1.2837	-0.3855
VERMONT	2,779	2,095	-684	0.0926	0.0838	-0.0087
VIRGINIA	14,587	16,083	+1,496	0.4865	0.6438	+0.1573
WASHINGTON	102,673	97,347	-5,326	3.4246	3.8970	+0.4724
WEST VIRGINIA	2,012	1,821	-191	0.0671	0.0728	+0.0057
WISCONSIN	96,343	98,722	+4,379	3.1468	3.9521	+0.8053
WYOMING	9,671	6,085	-3,586	0.3225	0.2435	-0.0788
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	733	724	-9	0.0244	0.0289	+0.0045
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	17,873	17,517	-356	0.5961	0.7012	+0.1051
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	141	139	-2	0.0047	0.0055	+0.0008
U.S. TOTALS	2,998,039	2,497,938	-500,101	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF MAJOR REHABILITATION AND REPLACEMENT
THOUSANDS OF 1980 DOLLARS
CATEGORY III B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	2,922	3,583	+661	0.0487	0.0600	+0.0113
ALASKA	103	96	-7	0.0017	0.0015	+0.0000
ARIZONA	1,057	320	-737	0.0176	0.0053	-0.0122
ARKANSAS	2,479	2,634	+155	0.0413	0.0441	+0.0028
CALIFORNIA	103,443	170,100	+66,657	1.7261	2.8495	+1.1234
COLORADO	111,222	109,269	-1,953	1.8538	1.8304	-0.0233
CONNECTICUT	23,223	14,320	-8,903	0.3870	0.2398	-0.1471
DELAWARE	600	1,359	+751	0.0101	0.0227	+0.0126
DIST. OF COLUMBIA	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	0	9	+9	0.0000	0.0001	+0.0001
GEORGIA	1,918	8,147	+6,229	0.0319	0.1364	+0.1045
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	367	363	-4	0.0060	0.0064	+0.0000
ILLINOIS	4,745	9,829	+5,084	0.0790	0.1646	+0.0856
INDIANA	19,335	19,878	+543	0.3222	0.3329	+0.0107
IOWA	855	1,158	+903	0.0042	0.0193	+0.0151
KANSAS	20,705	19,765	-940	0.3451	0.3310	-0.0139
KENTUCKY	0	8,271	+8,271	0.0000	0.1385	+0.1385
LOUISIANA	15,189	11,321	-3,868	0.2531	0.1896	-0.0634
MAINE	17,292	6,636	-10,656	0.2882	0.1111	-0.1770
MARYLAND	1,657,931	1,619,582	-38,349	27.6337	27.1313	-0.5023
MASSACHUSETTS	76,182	108,046	+31,864	1.2697	1.8099	+0.5402
MICHIGAN	40,202	76,863	+36,661	0.6700	1.2876	+0.6176
MINNESOTA	15,366	28,609	+13,243	0.2561	0.4792	+0.2231
MISSISSIPPI	0	0	+0	0.0000	0.0000	+0.0000
MISSOURI	9,007	32,069	+23,062	0.1501	0.5372	+0.3871
MONTANA	1,819	525	-1,294	0.0303	0.0087	-0.0215
NEBRASKA	0	1,156	+1,156	0.0000	0.0193	+0.0193
NEVADA	453	2,753	+2,300	0.0075	0.0461	+0.0386
NEW HAMPSHIRE	20,221	5,092	-15,129	0.3370	0.0852	-0.2516
NEW JERSEY	1,739	1,670	-69	0.0289	0.0279	-0.0009
NEW MEXICO	1,479	274	-1,205	0.0246	0.0045	-0.0200
NEW YORK	3,397,588	3,359,044	-38,544	56.6297	56.2710	-0.3586
NORTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
NORTH DAKOTA	1,896	0	-1,896	0.0316	0.0000	-0.0315
OHIO	9,878	11,630	+1,752	0.1646	0.1948	+0.0302
OKLAHOMA	25,702	24,907	-795	0.4297	0.4185	-0.0111
OREGON	47,648	50,318	+2,670	0.7975	0.8429	+0.0454
PENNSYLVANIA	0	798	+798	0.0000	0.0133	+0.0133
RHODE ISLAND	3,154	26,258	+23,104	0.0525	0.4398	+0.3873
SOUTH CAROLINA	0	548	+548	0.0000	0.0091	+0.0091
SOUTH DAKOTA	1,466	1,657	+189	0.0244	0.0277	+0.0033
TENNESSEE	0	366	+366	0.0000	0.0061	+0.0061
TEXAS	83,054	105,289	+22,235	1.3843	1.7638	+0.3795
UTAH	0	0	+0	0.0000	0.0000	+0.0000
VERMONT	13,402	5,986	-7,416	0.2233	0.1002	-0.1230
VIRGINIA	1,880	14,063	+12,183	0.0313	0.2355	+0.2042
WASHINGTON	73,868	74,808	+940	1.2312	1.2531	+0.0219
WEST VIRGINIA	817	2,852	+2,035	0.0136	0.0477	+0.0341
WISCONSIN	176,939	15,872	-161,067	2.9491	0.2658	-2.6832
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	1,462	0	-1,462	0.0243	0.0000	-0.0242
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	11,338	11,213	-125	0.1889	0.1878	-0.0010
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	5,999,656	5,969,404	-30,252	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 10

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF ELIGIBLE NEW COLLECTORS AND APPURTENANCES
THOUSANDS OF 1980 DOLLARS
CATEGORY IV A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	407,912	288,722	-119,190	1.7433	1.5646	-0.1786
ALASKA	50,390	42,879	-7,511	0.2153	0.2323	+0.0170
ARIZONA	145,850	128,733	-17,117	0.6233	0.6976	+0.0742
ARKANSAS	164,842	126,472	-38,370	0.7045	0.6853	-0.0191
CALIFORNIA	1,740,896	1,287,386	-453,510	7.4403	6.9767	-0.4636
COLORADO	35,315	21,526	-13,791	0.1509	0.1166	-0.0342
CONNECTICUT	498,288	483,466	-14,822	2.1296	2.6200	+0.4904
DELAWARE	51,346	33,766	-17,580	0.2194	0.1829	-0.0364
DIST. OF COLUMBIA	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,919,498	1,311,497	-607,993	8.2036	7.1073	-1.0962
GEORGIA	465,594	247,779	-217,815	1.9898	1.3427	-0.6471
HAWAII	263,621	260,987	+17,366	1.0411	1.4143	+0.3731
IDAHO	138,192	102,950	-35,242	0.5906	0.5579	-0.0326
ILLINOIS	200,362	179,769	-20,593	0.8563	0.9742	+0.1178
INDIANA	416,465	304,086	-112,379	1.7799	1.6479	-0.1319
IOWA	151,651	112,260	-39,391	0.6481	0.6083	-0.0397
KANSAS	148,986	108,239	-40,747	0.6367	0.5865	-0.0501
KENTUCKY	707,915	512,999	-194,916	3.0255	2.7800	-0.2456
LOUISIANA	398,709	314,202	-84,507	1.6869	1.7027	+0.0158
MAINE	270,956	206,156	-64,800	1.1580	1.1172	-0.0408
MARYLAND	271,908	226,784	-45,124	1.1620	1.2289	+0.0668
MASSACHUSETTS	928,523	852,715	-75,808	3.9683	4.6210	+0.6526
MICHIGAN	1,214,527	731,882	-482,645	5.1907	3.9662	-1.2244
MINNESOTA	188,926	154,442	-34,484	0.8074	0.8369	+0.0295
MISSISSIPPI	194,326	104,549	-89,777	0.8305	0.5665	-0.2639
MISSOURI	281,446	227,243	-54,203	1.2028	1.2314	+0.0286
MONTANA	29,258	13,344	-15,914	0.1250	0.0723	-0.0527
NEBRASKA	40,083	20,205	-19,878	0.1713	0.1094	-0.0618
NEVADA	46,990	39,910	-7,080	0.2008	0.2162	+0.0154
NEW HAMPSHIRE	331,545	277,917	-53,628	1.4169	1.5061	+0.0891
NEW JERSEY	806,399	748,933	-57,466	3.4464	4.0586	+0.6122
NEW MEXICO	52,532	36,591	-15,941	0.2245	0.1982	-0.0262
NEW YORK	2,997,353	2,313,145	-684,208	12.8103	12.5355	-0.2747
NORTH CAROLINA	590,344	414,879	-175,465	2.5230	2.2483	-0.2747
NORTH DAKOTA	4,408	2,304	-2,104	0.0188	0.0124	-0.0063
OHIO	840,850	714,929	-125,921	3.5936	3.8743	+0.2807
OKLAHOMA	171,490	139,090	-32,400	0.7329	0.7537	+0.0208
OREGON	356,120	271,795	-82,325	1.5134	1.4729	-0.0405
PENNSYLVANIA	1,208,690	1,295,810	+87,120	5.1657	7.0223	+1.0565
RHODE ISLAND	320,715	280,540	-40,175	1.3706	1.5203	+0.1496
SOUTH CAROLINA	386,971	250,239	-136,732	1.6538	1.3561	-0.2977
SOUTH DAKOTA	7,012	3,042	-3,970	0.0299	0.0164	-0.0136
TENNESSEE	630,169	408,818	-221,351	2.6932	2.2154	-0.4777
TEXAS	697,264	663,906	-33,358	2.9800	3.5978	+0.6178
UTAH	75,595	55,060	-20,535	0.3230	0.2983	-0.0246
VERMONT	95,395	70,607	-24,788	0.4076	0.3826	-0.0250
VIRGINIA	539,661	334,420	-205,441	2.3072	1.8123	-0.4949
WASHINGTON	566,481	499,268	-67,213	2.4210	2.7056	+0.2845
WEST VIRGINIA	633,178	509,010	-124,168	2.7061	2.7584	+0.0523
WISCONSIN	331,331	257,260	-74,071	1.4160	1.3941	-0.0219
WYOMING	1,530	891	-639	0.0065	0.0048	-0.0017
AMERICAN SAMOA	11,617	10,088	-1,529	0.0496	0.0546	+0.0050
GUAM	1,225	0	-1,225	0.0052	0.0000	-0.0052
MARIANAS GROUP	22,130	20,165	-1,965	0.0945	0.1092	+0.0146
PUERTO RICO	316,706	377,489	+60,783	1.3535	2.0457	+0.6921
PAC. TR. TERR.	40,323	36,161	-4,162	0.1723	0.1959	+0.0236
VIRGIN ISLANDS	13,902	15,300	+1,398	0.0594	0.0829	+0.0234
U.S. TOTALS	23,397,903	18,452,603	-4,945,300	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 11

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1980 DOLLARS
CATEGORY IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	222,220	222,955	+735	0.9779	1.0452	+0.0673
ALASKA	117,060	105,785	-11,275	0.5151	0.4959	-0.0191
ARIZONA	245,739	197,734	-48,005	1.0813	0.9269	-0.1543
ARKANSAS	121,942	115,247	-6,695	0.5366	0.5402	+0.0036
CALIFORNIA	2,001,758	1,964,020	-37,738	8.8089	9.2073	+0.3984
COLORADO	327,256	356,854	+29,598	1.4401	1.6729	+0.2328
CONNECTICUT	224,377	199,025	-25,352	0.9873	0.9330	-0.0542
DELAWARE	148,160	90,440	-57,720	0.6519	0.4239	-0.2279
DIST. OF COLUMBIA	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,798,680	1,719,115	-79,565	7.9152	8.0592	+0.1440
GEORGIA	504,926	439,739	-65,187	2.2219	2.0614	-0.1603
HAWAII	393,286	298,017	-95,269	1.7306	1.3971	-0.3334
IDAHO	103,996	93,049	-10,947	0.4576	0.4362	-0.0213
ILLINOIS	347,304	333,503	-13,801	1.5283	1.5634	+0.0351
INDIANA	382,970	208,894	-174,076	1.6852	0.9792	-0.7058
IOWA	248,432	232,390	-16,042	1.0932	1.0894	-0.0037
KANSAS	356,494	307,088	-49,406	1.5687	1.4396	-0.1290
KENTUCKY	474,684	497,937	+23,253	2.0888	2.3343	+0.2455
LOUISIANA	362,467	331,851	-30,616	1.5950	1.5557	-0.0392
MAINE	190,139	159,098	-31,045	0.8367	0.7458	-0.0908
MARYLAND	397,369	371,859	-25,510	1.7486	1.7432	-0.0053
MASSACHUSETTS	667,926	634,404	-33,522	2.9392	2.9740	+0.0348
MICHIGAN	825,943	683,076	-142,867	3.6346	3.2022	-0.4323
MINNESOTA	305,033	391,592	+86,559	1.3423	1.8357	+0.4934
MISSISSIPPI	207,847	231,846	+23,999	0.9146	1.0868	+0.1722
MISSOURI	834,301	672,117	-142,184	3.6714	3.1508	-0.5206
MONTANA	25,034	36,390	+11,356	0.1101	0.1705	+0.0604
NEBRASKA	61,995	65,935	+3,940	0.2728	0.3090	+0.0362
NEVADA	41,110	34,742	-6,368	0.1809	0.1628	-0.0180
NEW HAMPSHIRE	363,863	307,348	-56,515	1.6012	1.4408	-0.1603
NEW JERSEY	739,769	852,890	+113,121	3.2554	3.9983	+0.7429
NEW MEXICO	40,160	43,183	+3,023	0.1767	0.2024	+0.0257
NEW YORK	2,292,534	1,583,755	-708,779	10.0885	7.4246	-2.6638
NORTH CAROLINA	539,216	523,279	-15,937	2.3728	2.4531	+0.0803
NORTH DAKOTA	18,239	14,167	-4,072	0.0802	0.0664	-0.0137
OHIO	1,014,993	829,592	-185,401	4.4665	3.8891	-0.5773
OKLAHOMA	158,801	137,504	-21,297	0.6988	0.6446	-0.0541
OREGON	370,303	319,434	-50,869	1.6295	1.4975	-0.1319
PENNSYLVANIA	650,829	584,716	-66,113	2.8640	2.7411	-0.1228
RHODE ISLAND	123,784	113,181	-10,603	0.5447	0.5305	-0.0141
SOUTH CAROLINA	309,637	296,905	-12,732	1.3625	1.3918	+0.0293
SOUTH DAKOTA	36,652	26,115	-10,537	0.1612	0.1224	-0.0387
TENNESSEE	449,983	453,148	+3,165	1.9801	2.1243	+0.1442
TEXAS	1,232,910	1,837,649	+604,739	5.4255	8.6149	+3.1894
UTAH	71,044	61,257	-9,787	0.3126	0.2871	-0.0254
VERMONT	38,449	40,150	+1,701	0.1691	0.1882	+0.0191
VIRGINIA	633,475	470,139	-163,336	2.7876	2.2040	-0.5835
WASHINGTON	591,967	698,708	+106,741	2.6050	3.2755	+0.6705
WEST VIRGINIA	233,196	171,890	-61,306	1.0262	0.8058	-0.2203
WISCONSIN	371,848	511,026	+139,578	1.6365	2.3956	+0.7611
WYOMING	11,863	35,263	+23,400	0.0522	0.1653	+0.1131
AMERICAN SAMOA	29,261	25,472	-3,789	0.1287	0.1194	-0.0092
GUAM	4,637	4,622	-15	0.0204	0.0216	+0.0012
MARIANAS GROUP	25,830	25,568	-262	0.1136	0.1197	+0.0061
PUERTO RICO	393,633	336,278	-57,355	1.7322	1.5764	-0.1557
PAC. TR. TERR.	19,239	19,897	+658	0.0846	0.0932	+0.0086
VIRGIN ISLANDS	20,020	13,121	-6,899	0.0880	0.0615	-0.0264
U.S. TOTALS	22,724,183	21,330,935	-1,393,248	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 12

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF COMBINED SEWER OVERFLOWS
THOUSANDS OF 1980 DOLLARS
CATEGORY V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	0	0	+0	0.0000	0.0000	+0.0000
ALASKA	11,272	15,535	+4,263	0.0355	0.0416	+0.0061
ARIZONA	0	0	+0	0.0000	0.0000	+0.0000
ARKANSAS	0	0	+0	0.0000	0.0000	+0.0000
CALIFORNIA	206,289	522,919	+316,630	0.6515	1.4068	+0.7553
COLORADO	813	80,242	+79,429	0.0025	0.2158	+0.2133
CONNECTICUT	490,661	657,001	+166,340	1.5496	1.7676	+0.2180
DELAWARE	158,622	233,807	+75,185	0.5009	0.6289	+0.1280
DIST. OF COLUMBIA	209,925	418,960	+209,035	0.6629	1.1271	+0.4642
FLORIDA	10,495	6,027	-4,468	0.0331	0.0161	-0.0168
GEORGIA	269,040	325,182	+56,142	0.8496	0.8748	+0.0252
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	70,424	88,041	+17,617	0.2224	0.2367	+0.0143
ILLINOIS	2,622,027	2,232,578	-389,449	8.2809	6.0069	-2.2738
INDIANA	3,592,528	2,926,510	-666,018	11.3459	7.8740	-3.4717
IOWA	237,248	295,539	+58,291	0.7492	0.7950	+0.0458
KANSAS	258,024	301,852	+43,828	0.8148	0.8120	-0.0026
KENTUCKY	728,675	822,261	+93,586	2.3013	2.2123	-0.0888
LOUISIANA	0	0	+0	0.0000	0.0000	+0.0000
MAINE	1,363,799	953,681	-390,118	4.2439	2.5659	-1.6778
MARYLAND	180,971	80,624	-100,347	0.5715	0.2168	-0.3545
MASSACHUSETTS	1,274,526	2,082,307	+807,781	4.0252	5.6026	+1.5774
MICHIGAN	1,970,817	1,860,930	-109,887	6.2242	5.0069	-1.2171
MINNESOTA	230,273	320,641	+90,368	0.7272	0.8626	+0.1354
MISSISSIPPI	40,961	0	-40,961	0.1293	0.0000	-0.1292
MISSOURI	932,240	813,810	-118,430	2.9442	2.1895	-0.7545
MONTANA	40,880	141,549	+100,669	0.1291	0.3807	+0.2516
NEBRASKA	87,091	85,086	-2,005	0.2750	0.2288	-0.0460
NEVADA	0	0	+0	0.0000	0.0000	+0.0000
NEW HAMPSHIRE	335,785	422,139	+86,354	1.0604	1.1357	+0.0753
NEW JERSEY	1,242,008	2,813,049	+1,571,041	3.9225	7.5688	+3.6463
NEW MEXICO	0	0	+0	0.0000	0.0000	+0.0000
NEW YORK	4,065,319	7,485,427	+3,420,108	12.8391	20.1405	+7.3014
NORTH CAROLINA	82,830	5,796	-77,034	0.2615	0.0154	-0.2459
NORTH DAKOTA	16,857	31,471	+14,614	0.0532	0.0845	+0.0313
OHIO	4,011,785	3,036,066	-975,719	12.6700	8.1688	-4.5010
OKLAHOMA	0	0	+0	0.0000	0.0000	+0.0000
OREGON	530,539	273,251	-257,288	1.6755	0.7351	-0.9402
PENNSYLVANIA	2,703,670	4,398,985	+1,695,315	8.5387	11.8359	+3.2972
RHODE ISLAND	405,090	368,587	-36,503	1.2793	0.9916	-0.2875
SOUTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
SOUTH DAKOTA	29,590	67,203	+37,613	0.0934	0.1807	+0.0873
TENNESSEE	244,108	224,097	-20,011	0.7709	0.6028	-0.1679
TEXAS	48,152	22,500	-25,652	0.1520	0.0604	-0.0916
UTAH	2,704	4,188	+1,484	0.0085	0.0111	+0.0026
VERMONT	257,046	218,398	-38,648	0.8118	0.5875	-0.2241
VIRGINIA	335,557	441,988	+106,431	1.0597	1.1891	+0.1294
WASHINGTON	1,098,781	847,758	-251,023	3.4701	2.2809	-1.1890
WEST VIRGINIA	927,667	807,152	-120,515	2.9297	2.1716	-0.7579
WISCONSIN	330,753	388,118	+57,365	1.0445	1.0441	-0.0002
WYOMING	3,891	15,895	+12,004	0.0122	0.0426	+0.0304
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	23,812	28,691	+4,879	0.0752	0.0770	+0.0018
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	31,663,525	37,165,841	+5,502,316	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR TREATMENT AND/OR CONTROL OF STORMWATERS
THOUSANDS OF 1980 DOLLARS
CATEGORY VI

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE	1978 EPA ESTIMATE	1980 EPA ASSESSMENT	CHANGE
ALABAMA	1,756,895	1,996,044	+239,149	2.3161	1.7552	-0.5607
ALASKA	150,072	987,681	+837,609	0.1978	0.8684	+0.6706
ARIZONA	653,733	1,150,126	+496,393	0.8618	1.0113	+0.1495
ARKANSAS	750,945	668,921	-82,024	0.9899	0.5881	-0.4016
CALIFORNIA	4,978,887	11,003,630	+6,024,743	6.5637	9.6768	+3.1131
COLORADO	392,977	812,155	+419,178	0.5180	0.7141	+0.1961
CONNECTICUT	3,002,974	4,392,759	+1,389,785	3.9588	3.8630	-0.0958
DELAWARE	332,571	632,807	+300,236	0.4384	0.5564	+0.1180
DIST. OF COLUMBIA	227,010	394,156	+167,146	0.2992	0.3465	+0.0473
FLORIDA	8,498,223	8,062,837	-435,386	11.2033	7.0906	-4.1125
GEORGIA	1,314,457	2,201,862	+887,385	1.7328	1.9362	+0.2034
HAWAII	252,953	704,256	+451,303	0.3334	0.6192	+0.2858
IDAHO	51,255	84,987	+33,732	0.0675	0.0746	+0.0071
ILLINOIS	2,281,816	2,598,786	+316,970	3.0081	2.2853	-0.7228
INDIANA	2,009,514	2,220,089	+210,575	2.6491	1.9523	-0.6966
IOWA	593,083	711,100	+118,017	0.7818	0.6252	-0.1566
KANSAS	515,012	1,450,605	+935,593	0.6789	1.2756	+0.5967
KENTUCKY	1,138,518	1,566,372	+427,854	1.5009	1.3774	-0.1233
LOUISIANA	1,156,059	1,264,814	+107,955	1.5251	1.1122	-0.4127
MAINE	835,300	1,116,662	+281,362	1.1011	0.9819	-0.1192
MARYLAND	1,465,974	2,695,093	+1,229,119	1.9326	2.3700	+0.4375
MASSACHUSETTS	3,942,581	6,619,087	+2,676,506	5.1975	5.8209	+0.6234
MICHIGAN	2,114,898	2,341,731	+226,833	2.7880	2.0592	-0.7286
MINNESOTA	649,303	1,381,970	+732,667	0.8559	1.2152	+0.3593
MISSISSIPPI	510,865	455,391	-55,474	0.6734	0.4003	-0.2729
MISSOURI	1,442,542	1,352,085	-90,457	1.9017	1.1889	-0.7128
MONTANA	32,077	85,079	+53,002	0.0422	0.0747	+0.0325
NEBRASKA	161,840	248,446	+86,606	0.2133	0.2183	+0.0050
NEVADA	267,703	451,525	+183,822	0.3529	0.3969	+0.0440
NEW HAMPSHIRE	1,179,439	2,667,748	+1,488,309	1.5548	2.3460	+0.7912
NEW JERSEY	6,616,162	12,500,845	+5,884,683	8.7221	10.9935	+2.2714
NEW MEXICO	104,530	193,565	+89,035	0.1378	0.1701	+0.0323
NEW YORK	2,693,207	3,926,883	+1,493,676	3.2868	3.4533	+0.1665
NORTH CAROLINA	956,074	1,668,543	+712,469	1.2604	1.4672	+0.2068
NORTH DAKOTA	20,638	29,278	+8,640	0.0272	0.0256	-0.0014
OHIO	4,377,513	3,982,863	-394,650	5.7709	3.5025	-2.2682
OKLAHOMA	506,714	823,632	+316,918	0.6680	0.7242	+0.0562
OREGON	1,109,052	1,293,565	+184,513	1.4620	1.1375	-0.3243
PENNSYLVANIA	3,209,456	6,495,625	+3,286,169	4.2310	5.7123	+1.4813
RHODE ISLAND	426,829	821,545	+394,716	0.5626	0.7223	+0.1597
SOUTH CAROLINA	467,130	856,991	+389,861	0.6158	0.7535	+0.1377
SOUTH DAKOTA	36,939	53,351	+16,412	0.0486	0.0468	-0.0016
TENNESSEE	1,616,216	2,132,954	+516,738	2.1306	1.8756	-0.2548
TEXAS	4,641,156	6,832,615	+2,191,459	6.1184	6.0087	-0.1095
UTAH	211,462	413,846	+202,384	0.2787	0.3638	+0.0851
VERMONT	0	0	+0	0.0000	0.0000	+0.0000
VIRGINIA	2,430,071	4,703,699	+2,273,628	3.2035	4.1364	+0.9329
WASHINGTON	1,690,325	2,069,810	+379,485	2.2283	1.8201	-0.4080
WEST VIRGINIA	270,723	498,495	+227,772	0.3568	0.4382	+0.0814
WISCONSIN	1,512,967	1,587,026	+74,059	1.9945	1.3955	-0.5988
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	497,068	505,914	+8,846	0.6552	0.4448	-0.2102
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	75,854,508	113,709,829	+37,855,321	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU V

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	903,496	3,769	239	4,140	218
ALASKA	507,011	406	1,248	667	760
ARIZONA	606,735	2,458	247	4,149	146
ARKANSAS	496,013	2,180	227	2,970	167
CALIFORNIA	6,773,865	22,696	298	26,786	252
COLORADO	1,006,726	2,772	363	4,371	230
CONNECTICUT	1,734,961	3,115	556	3,741	463
DELAWARE	499,924	582	858	841	594
DIST. OF COLUMBIA	442,177	656	674	661	668
FLORIDA	4,907,266	8,860	553	15,049	326
GEORGIA	1,679,808	5,118	328	7,053	238
HAWAII	818,167	915	894	1,366	598
IDAHO	509,642	905	563	1,183	430
ILLINOIS	4,529,845	11,230	403	12,358	366
INDIANA	4,027,278	5,400	745	6,059	664
IOWA	1,259,891	2,903	433	3,101	406
KANSAS	1,134,664	2,369	478	2,517	450
KENTUCKY	2,459,498	3,527	697	4,224	582
LOUISIANA	1,148,708	4,026	285	4,659	246
MAINE	1,526,071	1,097	1,389	1,222	1,247
MARYLAND	3,031,450	4,149	730	5,583	542
MASSACHUSETTS	4,719,162	5,769	818	6,614	713
MICHIGAN	4,953,325	9,208	537	10,314	480
MINNESOTA	1,553,304	4,060	382	4,505	344
MISSISSIPPI	844,128	2,406	350	2,740	308
MISSOURI	2,752,925	4,868	565	5,225	526
MONTANA	252,659	786	321	938	269
NEBRASKA	362,162	1,574	230	1,734	208
NEVADA	262,082	702	364	1,312	184
NEW HAMPSHIRE	1,295,642	887	1,460	1,306	992
NEW JERSEY	6,466,107	7,332	881	8,747	739
NEW MEXICO	194,282	1,241	156	1,781	109
NEW YORK	18,331,095	17,649	1,038	18,922	968
NORTH CAROLINA	1,740,928	5,606	310	7,419	234
NORTH DAKOTA	86,112	657	131	690	124
OHIO	6,373,463	10,731	593	12,031	529
OKLAHOMA	624,012	2,892	215	3,702	168
OREGON	1,252,273	2,527	495	3,209	390
PENNSYLVANIA	7,785,484	11,731	663	12,365	629
RHODE ISLAND	979,175	929	1,054	1,033	947
SOUTH CAROLINA	871,222	2,932	297	3,700	235
SOUTH DAKOTA	252,492	689	366	730	345
TENNESSEE	1,858,601	4,380	423	5,573	332
TEXAS	4,302,816	13,385	320	18,069	243
UTAH	488,203	1,367	292	1,688	237
VERMONT	445,685	493	903	607	734
VIRGINIA	1,969,986	5,197	379	6,785	291
WASHINGTON	3,125,975	3,926	796	4,859	643
WEST VIRGINIA	1,866,573	1,878	993	2,803	931
WISCONSIN	2,271,348	4,720	481	5,553	409
WYOMING	150,991	450	335	484	311
AMERICAN SAMOA	58,234	31	1,878	40	1,455
GUAM	24,648	114	214	275	88
MARIANAS GROUP	62,347	17	3,667	31	2,011
PUERTO RICO	1,185,302	3,358	352	4,700	252
PAC. TR. TERR.	109,931	111	990	174	631
VIRGIN ISLANDS	47,344	96	493	116	408
U.S. TOTALS	119,898,954	223,824	535	272,644	439

FEBRUARY 10, 1981
TABLE 15

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CAT I, IIA, IIB, IVB

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	532,702	3,769	141	4,148	128
ALASKA	423,841	486	1,043	667	635
ARIZONA	476,662	2,450	194	4,149	114
ARKANSAS	339,167	2,180	155	2,970	114
CALIFORNIA	4,741,632	22,696	208	26,786	177
COLORADO	789,320	2,772	283	4,371	179
CONNECTICUT	568,595	3,115	182	3,741	151
DELAWARE	227,410	582	390	841	270
DIST. OF COLUMBIA	8,049	656	12	661	12
FLORIDA	3,500,258	8,860	395	15,049	232
GEORGIA	1,010,348	5,110	197	7,053	143
HAWAII	557,165	915	608	1,366	407
IDAHO	301,612	905	333	1,183	254
ILLINOIS	1,925,714	11,230	171	12,358	155
INDIANA	735,546	5,400	136	6,059	121
IOWA	752,639	2,903	259	3,101	242
KANSAS	649,169	2,369	274	2,517	257
KENTUCKY	1,020,816	3,527	291	4,226	243
LOUISIANA	771,110	4,026	191	4,659	165
MAINE	344,744	1,097	314	1,222	282
MARYLAND	1,093,495	4,149	263	5,583	195
MASSACHUSETTS	1,663,501	5,769	288	6,614	251
MICHIGAN	2,223,052	9,208	241	10,314	215
MINNESOTA	1,012,516	4,060	249	4,505	224
MISSISSIPPI	620,659	2,406	261	2,740	229
MISSOURI	1,638,052	4,868	336	5,225	313
MONTANA	95,676	786	121	938	102
NEBRASKA	254,763	1,574	161	1,734	146
NEVADA	197,052	702	280	1,312	150
NEW HAMPSHIRE	582,077	887	656	1,306	445
NEW JERSEY	2,795,881	7,332	381	8,747	319
NEW MEXICO	157,417	1,241	126	1,781	88
NEW YORK	5,076,384	17,649	287	18,922	268
NORTH CAROLINA	1,234,538	5,604	220	7,419	166
NORTH DAKOTA	51,835	657	78	690	75
OHIO	2,386,889	10,731	222	12,031	198
OKLAHOMA	420,602	2,892	145	3,702	113
OREGON	613,360	2,527	242	3,209	191
PENNSYLVANIA	2,074,233	11,731	176	12,365	167
RHODE ISLAND	301,374	929	324	1,033	291
SOUTH CAROLINA	559,584	2,932	190	3,700	151
SOUTH DAKOTA	176,250	689	255	730	241
TENNESSEE	1,086,603	4,380	248	5,573	194
TEXAS	3,425,780	13,385	255	18,069	189
UTAH	308,888	1,367	225	1,688	182
VERMONT	148,519	493	301	607	244
VIRGINIA	1,163,432	5,197	223	6,755	172
WASHINGTON	1,606,794	3,926	409	4,859	330
WEST VIRGINIA	545,738	1,878	290	2,003	272
WISCONSIN	1,511,376	4,720	320	5,553	272
WYOMING	128,120	450	284	486	264
AMERICAN SAMOA	48,146	31	1,553	40	1,203
GUAM	23,724	114	208	275	86
MARIANAS GROUP	42,182	17	2,481	31	1,360
PUERTO RICO	750,392	3,358	223	4,700	159
PAC. TR. TERR.	73,770	111	664	176	423
VIRGIN ISLANDS	31,905	96	332	116	275
U.S. TOTALS	55,813,168	223,824	249	272,644	204

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY I

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	262,849	3,769	69	4,140	63
ALASKA	318,056	406	783	667	476
ARIZONA	279,069	2,450	113	4,149	67
ARKANSAS	206,081	2,180	94	2,970	69
CALIFORNIA	2,636,620	22,696	116	26,786	98
COLORADO	367,913	2,772	132	4,371	84
CONNECTICUT	315,328	3,115	101	3,741	84
DELAWARE	95,914	582	164	841	114
DIST. OF COLUMBIA	8,049	656	12	661	12
FLORIDA	1,378,567	8,860	155	15,049	91
GEORGIA	460,992	5,118	90	7,053	65
HAWAII	252,171	915	275	1,366	184
IDAHO	162,878	905	179	1,183	137
ILLINOIS	621,655	11,230	55	12,358	50
INDIANA	276,971	5,400	51	6,059	45
IOWA	463,474	2,903	159	3,101	149
KANSAS	336,411	2,369	142	2,517	133
KENTUCKY	439,789	3,527	124	4,224	104
LOUISIANA	431,893	4,026	107	4,659	92
MAINE	183,004	1,097	166	1,222	149
MARYLAND	334,655	4,149	80	5,583	59
MASSACHUSETTS	965,117	5,769	167	6,614	145
MICHIGAN	1,421,472	9,206	154	10,314	137
MINNESOTA	325,902	4,060	80	4,505	72
MISSISSIPPI	338,057	2,406	140	2,740	123
MISSOURI	964,701	4,868	198	5,225	184
MONTANA	47,048	786	59	938	50
NEBRASKA	188,828	1,574	119	1,734	108
NEVADA	95,196	702	135	1,312	72
NEW HAMPSHIRE	261,354	887	294	1,306	200
NEW JERSEY	1,744,714	7,332	237	8,747	199
NEW MEXICO	113,352	1,241	91	1,781	63
NEW YORK	3,394,414	17,649	192	18,922	179
NORTH CAROLINA	528,288	5,606	94	7,419	71
NORTH DAKOTA	37,668	657	57	690	54
OHIO	913,912	10,731	85	12,031	75
OKLAHOMA	250,762	2,892	86	3,702	67
OREGON	181,485	2,527	71	3,209	56
PENNSYLVANIA	1,256,350	11,731	107	12,365	101
RHODE ISLAND	157,690	929	169	1,033	152
SOUTH CAROLINA	240,340	2,932	81	3,708	64
SOUTH DAKOTA	114,800	689	166	730	157
TENNESSEE	486,106	4,380	110	5,573	87
TEXAS	1,432,636	13,389	107	18,069	79
UTAH	132,388	1,367	96	1,688	78
VERMONT	95,769	493	194	607	157
VIRGINIA	654,703	5,197	125	6,755	96
WASHINGTON	786,427	3,926	200	4,859	161
WEST VIRGINIA	362,784	1,878	193	2,003	181
WISCONSIN	899,013	4,720	190	5,553	161
WYOMING	82,301	450	182	484	170
AMERICAN SAMOA	22,674	31	731	40	566
GUAM	19,102	114	167	275	69
MARIANAS GROUP	16,634	17	978	31	536
PUERTO RICO	407,810	3,358	121	4,700	86
PAC. TR. TERR.	53,073	111	485	174	309
VIRGIN ISLANDS	18,784	96	195	116	161
U.S. TOTALS	28,844,791	223,624	128	272,644	105

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY IIA

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	35,238	3,769	9	4,140	8
ALASKA	0	406	0	667	0
ARIZONA	59	2,450	0	4,149	0
ARKANSAS	9,983	2,180	4	2,970	3
CALIFORNIA	70,172	22,694	3	26,786	2
COLORADO	60,553	2,772	21	4,371	13
CONNECTICUT	44,749	3,115	14	3,741	11
DELAWARE	41,056	582	70	841	48
DIST. OF COLUMBIA	0	656	0	661	0
FLORIDA	223,859	8,860	25	15,049	14
GEORGIA	103,141	5,118	20	7,053	14
HAWAII	6,977	915	7	1,366	5
IDAHO	41,057	905	45	1,183	34
ILLINOIS	969,107	11,230	86	12,358	78
INDIANA	188,807	5,400	34	6,059	31
IOWA	56,775	2,903	19	3,101	18
KANSAS	5,670	2,369	2	2,517	2
KENTUCKY	90,955	3,527	25	4,224	21
LOUISIANA	6,168	4,026	1	4,659	1
MAINE	166	1,097	0	1,222	0
MARYLAND	48,706	4,149	11	5,583	8
MASSACHUSETTS	46,968	5,769	8	6,614	7
MICHIGAN	75,638	9,208	8	10,314	7
MINNESOTA	262,029	4,060	64	4,505	58
MISSISSIPPI	56,840	2,406	23	2,740	20
MISSOURI	336	4,868	0	5,225	0
MONTANA	12,238	786	15	938	13
NEBRASKA	0	1,570	0	1,734	0
NEVADA	31,684	702	45	1,312	24
NEW HAMPSHIRE	4,655	887	5	1,306	3
NEW JERSEY	93,344	7,332	12	8,747	10
NEW MEXICO	306	1,241	0	1,781	0
NEW YORK	70,957	17,649	4	18,922	3
NORTH CAROLINA	106,448	5,606	18	7,419	14
NORTH DAKOTA	0	657	0	690	0
OHIO	401,150	10,731	37	12,031	33
OKLAHOMA	32,336	2,892	11	3,702	8
OREGON	105,649	2,527	41	3,209	32
PENNSYLVANIA	199,948	11,731	17	12,365	16
RHODE ISLAND	30,503	929	32	1,033	29
SOUTH CAROLINA	20,916	2,932	7	3,700	5
SOUTH DAKOTA	25,183	689	36	730	34
TENNESSEE	131,447	4,380	30	5,573	23
TEXAS	97,840	13,365	7	18,069	5
UTAH	115,243	1,367	84	1,688	68
VERMONT	10,780	493	21	607	17
VIRGINIA	21,458	5,197	4	6,795	3
WASHINGTON	121,371	3,926	30	4,859	24
WEST VIRGINIA	10,193	1,878	5	2,003	5
WISCONSIN	101,337	4,720	21	5,553	18
WYOMING	10,556	450	23	484	21
AMERICAN SAMOA	0	31	0	40	0
GUAM	0	114	0	275	0
MARIANAS GROUP	0	17	0	31	0
PUERTO RICO	6,304	3,358	1	4,700	1
PAC. TR. TERR.	0	111	0	174	0
VIRGIN ISLANDS	0	96	0	116	0
U.S. TOTALS	4,206,853	223,624	18	272,644	15

FEBRUARY 10, 1981
TABLE 18

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY IIB

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	11,660	3,769	3	4,140	2
ALASKA	0	406	0	667	0
ARIZONA	0	2,450	0	4,149	0
ARKANSAS	7,856	2,180	3	2,970	2
CALIFORNIA	70,820	22,696	3	26,786	2
COLORADO	0	2,772	0	4,371	0
CONNECTICUT	9,403	3,115	3	3,741	2
DELAWARE	0	582	0	841	0
DIST. OF COLUMBIA	0	656	0	661	0
FLORIDA	178,717	8,860	20	15,089	11
GEORGIA	6,476	5,118	1	7,053	0
HAWAII	0	915	0	1,366	0
IDAHO	4,628	905	5	1,183	3
ILLINOIS	1,449	11,230	0	12,358	0
INDIANA	60,874	5,400	11	6,059	10
IOWA	0	2,903	0	3,101	0
KANSAS	0	2,369	0	2,517	0
KENTUCKY	135	3,527	0	4,224	0
LOUISIANA	1,198	4,026	0	4,659	0
MAINE	2,480	1,097	2	1,222	2
MARYLAND	338,277	4,149	81	5,583	60
MASSACHUSETTS	17,012	5,769	2	6,614	2
MICHIGAN	42,866	9,208	4	10,314	4
MINNESOTA	32,993	4,060	8	4,505	7
MISSISSIPPI	1,916	2,406	0	2,740	0
MISSOURI	898	4,868	0	5,225	0
MONTANA	0	786	0	938	0
NEBRASKA	0	1,574	0	1,734	0
NEVADA	35,430	702	50	1,312	27
NEW HAMPSHIRE	8,720	887	9	1,306	6
NEW JERSEY	104,933	7,332	14	8,747	11
NEW MEXICO	576	1,241	0	1,781	0
NEW YORK	27,258	17,649	1	18,922	1
NORTH CAROLINA	76,523	5,606	13	7,419	10
NORTH DAKOTA	0	657	0	690	0
OHIO	242,235	10,731	22	12,031	20
OKLAHOMA	0	2,892	0	3,702	0
OREGON	6,794	2,527	2	3,209	2
PENNSYLVANEA	33,219	11,731	2	12,365	2
RHODE ISLAND	0	929	0	1,033	0
SOUTH CAROLINA	1,423	2,932	0	3,700	0
SOUTH DAKOTA	10,152	689	14	730	13
TENNESSEE	15,902	4,380	3	5,573	2
TEXAS	57,655	13,385	4	18,069	3
UTAH	0	1,367	0	1,688	0
VERMONT	1,820	493	3	607	2
VIRGINIA	17,132	5,197	3	6,755	2
WASHINGTON	288	3,926	0	4,859	0
WEST VIRGINIA	871	1,678	0	2,083	0
WISCONSIN	0	4,720	0	5,953	0
WYOMING	0	450	0	484	0
AMERICAN SAMOA	0	31	0	40	0
GUAM	0	114	0	275	0
MARIANAS GROUP	0	17	0	31	0
PUERTO RICO	0	3,358	0	4,700	0
PAC. TR. TERR.	0	111	0	174	0
VIRGIN ISLANDS	0	96	0	116	0
U.S. TOTALS	1,430,589	223,624	6	272,644	5

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY III A

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	78,489	3,769	20	4,140	18
ALASKA	24,660	406	60	667	36
ARIZONA	820	2,450	0	4,149	0
ARKANSAS	27,740	2,180	12	2,970	9
CALIFORNIA	51,828	22,696	2	26,786	1
COLORADO	10,371	2,772	3	4,371	2
CONNECTICUT	11,669	3,115	3	3,741	3
DELAWARE	3,582	582	6	841	4
DIST. OF COLUMBIA	15,168	656	23	661	22
FLORIDA	89,475	8,868	10	15,049	5
GEORGIA	88,352	5,118	17	7,053	12
HAWAII	15	915	0	1,366	0
IDAHO	16,676	905	18	1,183	14
ILLINOIS	181,955	11,230	16	12,358	14
INDIANA	41,258	5,400	7	6,059	6
IOWA	98,295	2,903	33	3,101	31
KANSAS	55,639	2,369	23	2,517	22
KENTUCKY	87,151	3,527	24	4,224	20
LOUISIANA	52,075	4,026	12	4,659	11
MAINE	12,854	1,097	11	1,222	10
MARYLAND	10,965	4,149	2	5,583	1
MASSACHUSETTS	12,593	5,769	2	6,614	1
MICHIGAN	60,598	9,208	6	10,314	5
MINNESOTA	37,096	4,060	9	4,505	8
MISSISSIPPI	110,920	2,406	46	2,740	40
MISSOURI	41,751	4,868	8	5,225	7
MONTANA	1,565	786	1	938	1
NEBRASKA	954	1,574	0	1,734	0
NEVADA	2,367	702	3	1,312	1
NEW HAMPSHIRE	8,417	887	9	1,306	6
NEW JERSEY	106,574	7,332	14	8,747	12
NEW MEXICO	0	1,241	0	1,781	0
NEW YORK	97,095	17,649	5	18,922	5
NORTH CAROLINA	85,715	5,606	15	7,419	11
NORTH DAKOTA	502	657	0	690	0
OHIO	223,949	10,731	20	12,031	18
OKLAHOMA	39,333	2,892	13	3,702	10
OREGON	43,549	2,527	17	3,209	13
PENNSYLVANIA	15,658	11,731	1	12,365	1
RHODE ISLAND	2,416	929	2	1,033	2
SOUTH CAROLINA	60,851	2,932	20	3,700	16
SOUTH DAKOTA	4,340	689	6	730	5
TENNESSEE	134,717	4,380	30	5,573	24
TEXAS	175,341	13,385	13	18,069	9
UTAH	32,067	1,367	23	1,688	18
VERMONT	2,095	493	4	607	3
VIRGINIA	16,083	5,197	3	6,755	2
WASHINGTON	97,347	3,926	24	4,859	20
WEST VIRGINIA	1,821	1,878	0	2,803	0
WISCONSIN	98,722	4,720	20	5,553	17
WYOMING	6,085	450	13	484	12
AMERICAN SAMOA	0	31	0	40	0
GUAM	724	114	6	275	2
MARIANAS GROUP	0	17	0	31	0
PUERTO RICO	17,517	3,398	5	4,700	3
PAC. TR. TERR.	0	111	0	174	0
VIRGIN ISLANDS	139	96	1	116	1
U.S. TOTALS	2,497,938	223,824	11	272,644	9

FEBRUARY 10, 1981
TABLE 28

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY III &

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	3,583	3,769	0	4,140	0
ALASKA	96	406	0	667	0
ARIZONA	320	2,450	0	4,149	0
ARKANSAS	2,634	2,180	1	2,970	0
CALIFORNIA	170,100	22,696	7	26,786	6
COLORADO	109,269	2,772	39	4,371	24
CONNECTICUT	14,320	3,115	4	3,741	3
DELAWARE	1,359	582	2	841	1
DIST. OF COLUMBIA	0	656	0	661	0
FLORIDA	9	8,860	0	15,049	0
GEORGIA	8,147	5,115	1	7,053	1
HAWAII	0	915	0	1,366	0
IDAHO	383	905	0	1,183	0
ILLINOIS	9,829	11,230	0	12,358	0
INDIANA	19,878	5,400	3	6,059	3
IOWA	1,158	2,903	0	3,101	0
KANSAS	19,765	2,369	8	2,517	7
KENTUCKY	8,271	3,527	2	4,224	1
LOUISIANA	11,321	4,026	2	4,659	2
MAINE	6,636	1,097	6	1,222	5
MARYLAND	1,619,582	4,149	390	5,583	290
MASSACHUSETTS	108,046	5,769	18	6,614	16
MICHIGAN	76,863	9,206	8	10,314	7
MINNESOTA	28,609	4,060	7	4,505	6
MISSISSIPPI	0	2,406	0	2,740	0
MISSOURI	32,069	4,868	6	5,225	6
MONTANA	525	786	0	938	0
NEBRASKA	1,154	1,574	0	1,734	0
NEVADA	2,753	702	3	1,312	2
NEW HAMPSHIRE	5,092	887	5	1,306	3
NEW JERSEY	1,670	7,332	0	8,747	0
NEW MEXICO	274	1,241	0	1,781	0
NEW YORK	3,359,044	17,649	190	18,922	177
NORTH CAROLINA	0	5,606	0	7,619	0
NORTH DAKOTA	0	657	0	690	0
OHIO	11,630	10,731	1	12,031	0
OKLAHOMA	26,987	2,892	8	3,702	6
OREGON	50,316	2,527	19	3,209	15
PENNSYLVANIA	798	11,731	0	12,365	0
RHODE ISLAND	26,258	929	28	1,033	25
SOUTH CAROLINA	546	2,932	0	3,700	0
SOUTH DAKOTA	1,697	689	2	736	2
TENNESSEE	366	4,380	0	5,573	0
TEXAS	105,289	13,389	7	18,069	5
UTAH	0	1,367	0	1,688	0
VERMONT	5,986	493	12	607	9
VIRGINIA	14,063	5,197	2	6,755	2
WASHINGTON	74,808	3,926	19	4,859	15
WEST VIRGINIA	2,852	1,878	1	2,803	1
WISCONSIN	15,872	4,720	3	5,553	2
WYOMING	0	450	0	484	0
AMERICAN SAMOA	0	31	0	40	0
GUAM	0	114	0	275	0
MARIANAS GROUP	0	17	0	31	0
PUERTO RICO	11,213	3,356	3	4,700	2
PAC. TR. TERR.	0	111	0	174	0
VIRGIN ISLANDS	0	96	0	116	0
U.S. TOTALS	5,969,484	223,824	26	272,644	21

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY IV A

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	280,722	3,769	76	4,140	69
ALASKA	42,879	406	105	667	64
ARIZONA	120,733	2,450	52	4,149	31
ARKANSAS	126,472	2,180	58	2,970	42
CALIFORNIA	1,287,386	22,696	56	26,786	48
COLORADO	21,524	2,772	7	4,371	4
CONNECTICUT	483,466	3,115	155	3,741	129
DELAWARE	33,766	582	58	841	40
DIST. OF COLUMBIA	0	636	0	661	0
FLORIDA	1,311,497	8,860	148	15,049	87
GEORGIA	247,779	5,118	48	7,053	35
HAWAII	260,987	915	285	1,366	191
IDAHO	102,950	905	113	1,103	87
ILLINOIS	179,769	11,230	16	12,358	14
INDIANA	304,086	5,400	56	6,059	50
IOWA	112,260	2,903	38	3,101	36
KANSAS	108,239	2,369	45	2,517	43
KENTUCKY	512,999	3,527	145	4,224	121
LOUISIANA	314,202	4,026	78	4,659	67
MAINE	206,156	1,097	187	1,222	168
MARYLAND	226,786	4,169	54	5,583	40
MASSACHUSETTS	852,715	5,769	147	6,814	125
MICHIGAN	731,882	9,208	79	10,314	70
MINNESOTA	154,442	4,060	38	4,505	34
MISSISSIPPI	104,549	2,406	43	2,740	38
MISSOURI	227,243	4,868	46	5,225	43
MONTANA	13,344	786	16	938	14
NEBRASKA	20,205	1,574	12	1,734	11
NEVADA	39,910	702	56	1,312	30
NEW HAMPSHIRE	277,917	887	313	1,306	212
NEW JERSEY	748,933	7,332	102	8,747	85
NEW MEXICO	36,591	1,241	29	1,781	20
NEW YORK	2,313,145	17,649	131	18,922	122
NORTH CAROLINA	416,879	5,606	74	7,419	55
NORTH DAKOTA	2,304	657	3	690	3
OHIO	714,929	10,731	66	12,031	59
OKLAHOMA	139,090	2,892	48	3,702	37
OREGON	271,795	2,527	107	3,209	84
PENNSYLVANIA	1,295,810	11,731	110	12,365	104
RHODE ISLAND	280,540	929	301	1,033	271
SOUTH CAROLINA	250,239	2,932	85	3,700	67
SOUTH DAKOTA	3,042	689	4	730	4
TENNESSEE	408,818	4,380	93	5,573	73
TEXAS	663,906	13,385	49	18,069	36
UTAH	55,060	1,367	40	1,688	32
VERMONT	70,607	493	143	607	116
VIRGINIA	334,420	5,197	64	6,755	49
WASHINGTON	499,268	3,926	127	4,859	102
WEST VIRGINIA	509,010	1,878	271	2,003	254
WISCONSIN	257,260	4,720	54	5,555	46
WYOMING	891	450	1	484	1
AMERICAN SAMOA	10,088	31	325	40	252
GUAM	0	114	0	275	0
MARIANAS GROUP	20,165	17	1,186	31	650
PUERTO RICO	377,489	3,358	112	4,700	80
PAC. TR. TERR.	36,161	111	325	174	207
VIRGIN ISLANDS	15,300	96	159	116	131
U.S. TOTALS	18,452,603	223,824	82	272,644	67

FEBRUARY 10, 1981
TABLE 22

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORY IV B

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	222,955	3,769	59	4,140	53
ALASKA	105,785	406	260	667	158
ARIZONA	197,736	2,450	80	4,140	47
ARKANSAS	115,247	2,188	52	2,970	38
CALIFORNIA	1,964,020	22,696	86	26,786	73
COLORADO	356,854	2,772	128	4,371	81
CONNECTICUT	199,025	3,115	63	3,741	53
DELAWARE	90,440	582	155	841	107
DIST. OF COLUMBIA	0	656	0	661	0
FLORIDA	1,719,115	8,860	194	15,049	114
GEORGIA	439,739	5,118	85	7,053	62
HAWAII	298,017	919	325	1,366	218
IDAHO	93,049	905	102	1,183	78
ILLINOIS	333,503	11,230	29	12,358	26
INDIANA	208,898	5,400	38	6,059	34
IOWA	232,390	2,903	80	3,101	74
KANSAS	307,088	2,369	129	2,517	122
KENTUCKY	497,937	3,527	141	4,226	117
LOUISIANA	331,851	4,026	82	4,659	71
MAINE	159,098	1,097	145	1,222	130
MARYLAND	371,859	4,149	89	5,503	66
MASSACHUSETTS	634,404	5,769	109	6,614	95
MICHIGAN	683,076	9,208	74	10,314	66
MINNESOTA	391,592	4,060	96	4,505	86
MISSISSIPPI	231,846	2,406	96	2,740	84
MISSOURI	672,117	4,868	138	5,225	128
MONTANA	36,390	784	46	938	38
NEBRASKA	65,935	1,574	41	1,734	38
NEVADA	36,742	702	49	1,312	28
NEW HAMPSHIRE	307,348	887	346	1,306	235
NEW JERSEY	852,890	7,332	116	8,747	97
NEW MEXICO	43,183	1,241	34	1,781	24
NEW YORK	1,583,755	17,649	89	18,922	83
NORTH CAROLINA	523,279	5,606	93	7,419	70
NORTH DAKOTA	16,167	687	21	690	20
OHIO	829,592	10,731	77	12,031	68
OKLAHOMA	137,584	2,892	47	3,702	37
OREGON	319,434	2,527	126	3,209	99
PENNSYLVANIA	586,716	11,731	49	12,365	47
RHODE ISLAND	113,181	929	121	1,033	109
SOUTH CAROLINA	296,905	2,932	101	3,708	80
SOUTH DAKOTA	26,115	689	37	730	35
TENNESSEE	453,148	4,380	103	5,573	81
TEXAS	1,837,649	13,385	137	18,069	101
UTAH	61,257	1,367	44	1,688	36
VERMONT	40,150	493	81	607	66
VIRGINIA	470,139	5,197	90	6,755	69
WASHINGTON	698,708	3,926	177	4,859	143
WEST VIRGINIA	171,890	1,878	91	2,003	85
WISCONSIN	511,026	4,720	108	5,553	92
WYOMING	35,263	490	78	684	72
AMERICAN SAMOA	25,472	31	821	40	636
GUAM	4,622	114	40	275	16
MARIANAS GROUP	25,548	17	1,502	31	824
PUERTO RICO	336,278	3,358	100	4,700	71
PAC. TR. TERR.	19,897	111	179	174	114
VIRGIN ISLANDS	13,121	96	136	114	113
U.S. TOTALS	21,330,935	223,624	95	272,644	78

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CAT V RECREATION USE

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	0	3,769	0	4,140	0
ALASKA	15,535	406	38	667	23
ARIZONA	0	2,450	0	4,149	0
ARKANSAS	0	2,188	0	2,970	0
CALIFORNIA	522,919	22,696	23	26,786	19
COLORADO	80,242	2,772	28	4,371	18
CONNECTICUT	657,001	3,115	210	3,781	175
DELAWARE	233,807	582	401	841	278
DIST. OF COLUMBIA	418,960	654	638	661	633
FLORIDA	4,027	8,868	0	15,049	0
GEORGIA	325,102	5,110	63	7,053	46
HAWAII	0	915	0	1,366	0
IDAHO	88,041	905	97	1,183	74
ILLINOIS	2,232,578	11,230	198	12,358	180
INDIANA	2,926,510	5,400	541	6,059	483
IOWA	295,539	2,903	101	3,101	95
KANSAS	301,852	2,369	127	2,517	119
KENTUCKY	822,261	3,527	233	4,224	194
LOUISIANA	0	4,026	0	4,059	0
MAINE	953,681	1,097	869	1,222	780
MARYLAND	80,624	4,149	19	5,583	14
MASSACHUSETTS	2,082,307	5,749	360	6,614	314
MICHIGAN	1,860,930	9,206	202	10,314	180
MINNESOTA	320,641	4,060	78	4,505	71
MISSISSIPPI	0	2,406	0	2,740	0
MISSOURI	813,810	4,868	167	5,225	155
MONTANA	141,549	786	180	936	150
NEBRASKA	85,084	1,574	54	1,734	49
NEVADA	0	702	0	1,312	0
NEW HAMPSHIRE	422,139	887	475	1,306	323
NEW JERSEY	2,813,089	7,332	383	8,767	321
NEW MEXICO	0	1,241	0	1,781	0
NEW YORK	7,485,427	17,649	424	18,922	395
NORTH CAROLINA	5,796	5,606	1	7,419	0
NORTH DAKOTA	31,471	657	47	690	45
OHIO	3,036,066	10,731	282	12,031	252
OKLAHOMA	0	2,892	0	3,702	0
OREGON	273,251	2,527	108	3,209	85
PENNSYLVANIA	4,398,985	11,731	374	12,365	355
RHODE ISLAND	368,587	929	396	1,033	356
SOUTH CAROLINA	0	2,932	0	3,700	0
SOUTH DAKOTA	67,203	689	97	730	92
TENNESSEE	228,097	4,380	51	5,573	40
TEXAS	22,500	13,365	1	16,069	1
UTAH	4,180	1,367	3	1,688	2
VERMONT	218,398	493	442	607	359
VIRGINIA	441,988	5,197	85	6,755	65
WASHINGTON	847,758	3,926	215	4,859	174
WEST VIRGINIA	807,152	1,878	429	2,003	402
WISCONSIN	388,118	4,720	82	5,553	69
WYOMING	15,895	450	35	484	32
AMERICAN SAMOA	0	31	0	40	0
GUAM	0	114	0	275	0
MARIANAS GROUP	0	17	0	31	0
PUERTO RICO	28,691	3,358	8	4,700	6
PAC. TR. TERR.	0	111	0	174	0
VIRGIN ISLANDS	0	96	0	116	0
U.S. TOTALS	37,165,841	223,824	166	272,644	136

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1979 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CAT V FISH & WILDLIFE

	1980 EPA * ASSESSMENT	1979 POPULATION	COSTS PER CAPITA (1979)	2000 POPULATION	COSTS PER CAPITA (2000)
ALABAMA	0	3,769	0	4,140	0
ALASKA	8,951	406	22	667	13
ARIZONA	0	2,450	0	4,149	0
ARKANSAS	0	2,180	0	2,970	0
CALIFORNIA	249,284	22,696	10	26,784	9
COLORADO	46,787	2,772	16	4,371	10
CONNECTICUT	341,747	3,115	109	3,741	91
DELAWARE	124,088	582	213	841	147
DIST. OF COLUMBIA	200,804	656	306	661	303
FLORIDA	3,416	8,860	0	15,049	0
GEORGIA	229,653	5,116	44	7,053	32
HAWAII	0	915	0	1,366	0
IDAHO	54,612	905	60	1,183	46
ILLINOIS	1,118,036	11,230	99	12,358	90
INDIANA	2,130,241	5,480	394	6,059	351
IOWA	190,242	2,903	65	3,101	61
KANSAS	275,789	2,369	116	2,517	109
KENTUCKY	441,440	3,527	125	4,226	104
LOUISIANA	0	4,026	0	4,659	0
MAINE	561,666	1,097	512	1,222	459
MARYLAND	44,962	4,149	10	5,583	8
MASSACHUSETTS	1,094,279	5,769	189	6,614	165
MICHIGAN	1,331,624	9,208	144	10,314	129
MINNESOTA	271,168	4,060	66	4,505	60
MISSISSIPPI	0	2,486	0	2,740	0
MISSOURI	662,114	4,868	136	5,225	126
MONTANA	181,577	786	231	938	193
NEBRASKA	64,491	1,574	40	1,734	37
NEVADA	0	702	0	1,312	0
NEW HAMPSHIRE	229,645	887	258	1,306	175
NEW JERSEY	1,448,506	7,332	197	8,747	165
NEW MEXICO	0	1,241	0	1,781	0
NEW YORK	3,476,291	17,649	196	18,922	183
NORTH CAROLINA	3,379	5,606	0	7,419	0
NORTH DAKOTA	20,050	657	30	690	29
OHIO	2,483,681	10,731	231	12,031	206
OKLAHOMA	0	2,892	0	3,702	0
OREGON	201,459	2,527	79	3,209	62
PENNSYLVANIA	2,285,215	11,731	194	12,365	184
RHODE ISLAND	184,323	929	198	1,033	178
SOUTH CAROLINA	0	2,932	0	3,700	0
SOUTH DAKOTA	52,028	689	75	730	71
TENNESSEE	152,480	4,380	34	5,573	27
TEXAS	20,038	13,305	1	18,069	1
UTAH	2,414	1,367	1	1,688	1
VERMONT	132,563	493	268	607	218
VIRGINIA	229,074	5,197	44	6,755	33
WASHINGTON	579,021	3,926	147	4,859	119
WEST VIRGINIA	480,155	1,878	255	2,003	239
WISCONSIN	314,755	4,720	66	5,553	56
WYOMING	9,161	450	20	484	18
AMERICAN SAMOA	0	31	0	40	0
GUAM	0	114	0	275	0
MARIANAS GROUP	0	17	0	31	0
PUERTO RICO	20,772	3,358	6	4,700	4
PAC. TR. TERR.	0	111	0	174	0
VIRGIN ISLANDS	0	96	0	116	0
U.S. TOTALS	21,952,861	223,824	98	272,644	80

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU V

	1978 EPA * ESTIMATE	1980 EPA * ASSESSMENT	2000 POP.	1978 COSTS PER CAPITA	1980 COSTS PER CAPITA	CHANGE IN PER CAPITA COSTS
ALABAMA	1,165,271	903,896	4,140	281	218	-63
ALASKA	634,402	507,011	667	951	760	-191
ARIZONA	630,833	606,735	4,149	152	146	-6
ARKANSAS	617,372	496,013	2,970	207	167	-40
CALIFORNIA	9,890,979	6,773,865	26,786	369	252	-117
COLORADO	1,167,056	1,006,726	4,371	266	230	-36
CONNECTICUT	1,701,168	1,736,961	3,741	454	463	+9
DELAWARE	478,848	499,924	841	569	594	+25
DIST. OF COLUMBIA	228,874	442,177	661	346	668	+322
FLORIDA	6,121,125	4,907,266	15,049	406	326	-80
GEORGIA	2,159,871	1,679,808	7,053	306	238	-68
HAWAII	1,056,785	818,167	1,366	773	598	-175
IDAHO	589,367	589,662	1,183	464	430	-34
ILLINOIS	5,050,175	4,529,845	12,358	408	366	-42
INDIANA	5,172,940	4,027,278	6,059	853	664	-189
IOWA	1,348,799	1,259,891	3,101	434	406	-28
KANSAS	1,356,918	1,134,664	2,517	539	450	-89
KENTUCKY	2,565,021	2,459,498	4,226	607	582	-25
LOUISIANA	1,398,352	1,148,708	4,659	300	246	-54
MAINE	2,015,767	1,524,071	1,222	1,649	1,247	-402
MARYLAND	3,579,498	3,031,458	5,583	641	542	-99
MASSACHUSETTS	4,215,140	4,719,162	6,614	637	713	+76
MICHIGAN	5,516,953	4,953,325	10,314	534	480	-54
MINNESOTA	1,657,660	1,553,304	4,505	367	344	-23
MISSISSIPPI	953,208	844,128	2,740	347	308	-39
MISSOURI	3,118,445	2,752,925	5,225	596	526	-70
MONTANA	154,961	252,659	938	165	269	+104
NEBRASKA	390,745	362,162	1,734	225	208	-17
NEVADA	319,893	242,082	1,312	243	184	-59
NEW HAMPSHIRE	1,420,292	1,295,642	1,306	1,087	992	-95
NEW JERSEY	5,161,537	6,466,107	8,747	590	739	+149
NEW MEXICO	195,262	194,282	1,781	109	109	+0
NEW YORK	17,412,453	18,331,095	18,922	920	968	+48
NORTH CAROLINA	2,039,306	1,740,928	7,419	274	234	-40
NORTH DAKOTA	101,290	86,112	690	146	124	-22
OHIO	8,336,874	6,373,463	12,031	692	529	-163
OKLAHOMA	703,682	624,012	3,702	190	168	-22
OREGON	1,889,402	1,252,273	3,209	588	390	-198
PENNSYLVANIA	6,590,895	7,785,484	12,365	533	629	+96
RHODE ISLAND	1,163,296	979,175	1,033	1,126	947	-179
SOUTH CAROLINA	1,033,659	871,222	3,700	279	235	-44
SOUTH DAKOTA	254,657	252,492	730	348	345	-3
TENNESSEE	2,162,157	1,854,601	5,573	387	332	-55
TEXAS	3,826,209	4,392,816	18,069	211	243	+32
UTAH	491,253	400,203	1,688	291	237	-54
VERMONT	567,013	445,605	607	934	734	-200
VIRGINIA	2,470,637	1,969,986	6,755	365	291	-74
WASHINGTON	3,396,401	3,125,975	4,859	698	643	-55
WEST VIRGINIA	2,270,450	1,866,573	2,003	1,133	931	-202
WISCONSIN	2,211,039	2,271,388	5,553	398	409	+11
WYOMING	92,363	150,991	484	190	311	+121
AMERICAN SAMOA	70,499	58,234	40	1,762	1,455	-307
GUAM	55,174	24,448	275	200	88	-112
MARIANAS GROUP	69,275	62,347	31	2,234	2,011	-223
PUERTO RICO	1,201,960	1,185,302	4,700	255	252	-3
PAC. TR. TERR.	111,052	109,931	174	638	631	-7
VIRGIN ISLANDS	54,265	47,344	116	467	408	-59
U.S. TOTALS	130,568,778	119,898,954	272,644	478	439	-39

FEBRUARY 10, 1981
TABLE 26

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1980 DOLLARS
CATEGORIES I THROUGH V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	903,496	903,496	+0	0.7479	0.7535	+0.0056
ALASKA	507,011	507,011	+0	0.4197	0.4228	+0.0031
ARIZONA	792,650	606,735	-185,915	0.6561	0.5060	-0.1501
ARKANSAS	496,013	496,013	+0	0.4106	0.4136	+0.0030
CALIFORNIA	7,050,609	6,773,865	-276,744	5.8365	5.6496	-0.1869
COLORADO	1,006,726	1,006,726	+0	0.8333	0.8396	+0.0062
CONNECTICUT	1,734,961	1,734,961	+0	1.4362	1.4470	+0.0108
DELAWARE	499,924	499,924	+0	0.4138	0.4169	+0.0031
DIST. OF COLUMBIA	442,177	442,177	+0	0.3660	0.3687	+0.0027
FLORIDA	4,907,266	4,907,266	+0	4.0622	4.0928	+0.0305
GEORGIA	1,679,808	1,679,808	+0	1.3905	1.4010	+0.0104
HAWAII	818,167	818,167	+0	0.6772	0.6823	+0.0050
IDAHO	509,662	509,662	+0	0.4219	0.4250	+0.0031
ILLINOIS	4,529,845	4,529,845	+0	3.7498	3.7780	+0.0282
INDIANA	4,026,860	4,027,278	+418	3.3334	3.3588	+0.0254
IOWA	1,259,891	1,259,891	+0	1.0429	1.0507	+0.0078
KANSAS	1,134,664	1,134,664	+0	0.9392	0.9463	+0.0070
KENTUCKY	2,459,498	2,459,498	+0	2.0359	2.0513	+0.0153
LOUISIANA	1,148,708	1,148,708	+0	0.9509	0.9580	+0.0071
MAINE	1,524,071	1,524,071	+0	1.2616	1.2711	+0.0094
MARYLAND	3,031,450	3,031,450	+0	2.5094	2.5283	+0.0188
MASSACHUSETTS	4,719,162	4,719,162	+0	3.9065	3.9359	+0.0293
MICHIGAN	4,953,325	4,953,325	+0	4.1004	4.1312	+0.0308
MINNESOTA	1,553,304	1,553,304	+0	1.2858	1.2955	+0.0096
MISSISSIPPI	844,128	844,128	+0	0.6987	0.7040	+0.0052
MISSOURI	2,752,925	2,752,925	+0	2.2786	2.2960	+0.0171
MONTANA	252,659	252,659	+0	0.2091	0.2107	+0.0015
NEBRASKA	362,162	362,162	+0	0.2998	0.3020	+0.0022
NEVADA	242,082	242,082	+0	0.2003	0.2019	+0.0015
NEW HAMPSHIRE	1,295,642	1,295,642	+0	1.0725	1.0806	+0.0080
NEW JERSEY	6,466,107	6,466,107	+0	5.3527	5.3929	+0.0402
NEW MEXICO	194,282	194,282	+0	0.1608	0.1620	+0.0012
NEW YORK	18,536,132	18,331,095	-205,037	15.3443	15.2887	-0.0555
NORTH CAROLINA	1,740,928	1,740,928	+0	1.4411	1.4519	+0.0108
NORTH DAKOTA	86,112	86,112	+0	0.0712	0.0718	+0.0005
OHIO	6,373,463	6,373,463	+0	5.2760	5.3156	+0.0396
OKLAHOMA	624,012	624,012	+0	0.5165	0.5204	+0.0038
OREGON	1,252,273	1,252,273	+0	1.0366	1.0444	+0.0077
PENNSYLVANIA	7,785,484	7,785,484	+0	6.4448	6.4933	+0.0484
RHODE ISLAND	979,175	979,175	+0	0.8105	0.8166	+0.0060
SOUTH CAROLINA	871,222	871,222	+0	0.7212	0.7266	+0.0054
SOUTH DAKOTA	252,545	252,492	-53	0.2090	0.2105	+0.0015
TENNESSEE	1,854,601	1,854,601	+0	1.5352	1.5468	+0.0115
TEXAS	4,410,392	4,392,816	-17,576	3.6509	3.6637	+0.0128
UTAH	400,203	400,203	+0	0.3312	0.3337	+0.0024
VERMONT	445,605	445,605	+0	0.3688	0.3716	+0.0027
VIRGINIA	1,969,986	1,969,986	+0	1.6307	1.6430	+0.0122
WASHINGTON	3,125,975	3,125,975	+0	2.5877	2.6071	+0.0194
WEST VIRGINIA	1,866,573	1,866,573	+0	1.5451	1.5567	+0.0116
WISCONSIN	2,464,756	2,271,348	-193,408	2.0403	1.8943	-0.1459
WYOMING	159,654	150,991	-8,663	0.1321	0.1259	-0.0062
AMERICAN SAMOA	58,234	58,234	+0	0.0482	0.0485	+0.0003
GUAM	39,328	24,448	-14,880	0.0325	0.0203	-0.0121
MARIANAS GROUP	62,347	62,347	+0	0.0516	0.0519	+0.0003
PUERTO RICO	1,185,302	1,185,302	+0	0.9812	0.9885	+0.0073
PAC. TR. TERR.	109,931	109,931	+0	0.0910	0.0916	+0.0006
VIRGIN ISLANDS	47,344	47,344	+0	0.0391	0.0394	+0.0002
U.S. TOTALS	120,800,812	119,898,954	-901,858	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

PER CAPITA COSTS FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 2000 POPULATION
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU V

	STATE * ESTIMATE	EPA * ASSESSMENT	2000 POP.	STATE COSTS PER CAPITA	EPA COSTS PER CAPITA	DIFF. IN PER CAPITA COSTS
ALABAMA	903,496	903,496	4,140	218	218	+0
ALASKA	507,011	507,011	667	760	760	+0
ARIZONA	792,650	686,735	4,149	191	166	-45
ARKANSAS	496,013	496,013	2,970	167	167	+0
CALIFORNIA	7,050,609	6,773,865	26,786	263	252	-11
COLORADO	1,006,726	1,006,726	4,371	230	230	+0
CONNECTICUT	1,734,961	1,734,961	3,741	463	463	+0
DELAWARE	499,924	499,924	841	594	594	+0
DIST. OF COLUMBIA	442,177	442,177	661	668	668	+0
FLORIDA	4,907,266	4,907,266	15,049	326	326	+0
GEORGIA	1,679,808	1,679,808	7,053	238	238	+0
HAWAII	818,167	818,167	1,366	598	598	+0
IDAHO	509,662	509,662	1,183	430	430	+0
ILLINOIS	4,529,845	4,529,845	12,358	366	366	+0
INDIANA	4,026,860	4,027,278	6,059	664	664	+0
IOWA	1,259,891	1,259,891	3,101	406	406	+0
KANSAS	1,134,644	1,134,644	2,517	450	450	+0
KENTUCKY	2,459,498	2,459,498	4,226	582	582	+0
LOUISIANA	1,148,708	1,148,708	4,659	246	246	+0
MAINE	1,524,071	1,524,071	1,222	1,247	1,247	+0
MARYLAND	3,031,450	3,031,450	5,583	542	542	+0
MASSACHUSETTS	4,719,162	4,719,162	6,614	713	713	+0
MICHIGAN	4,953,325	4,953,325	10,314	480	480	+0
MINNESOTA	1,553,304	1,553,304	4,505	344	344	+0
MISSISSIPPI	844,128	844,128	2,740	308	308	+0
MISSOURI	2,752,925	2,752,925	5,225	526	526	+0
MONTANA	252,659	252,659	938	269	269	+0
NEBRASKA	362,162	362,162	1,734	208	208	+0
NEVADA	242,082	242,082	1,312	184	184	+0
NEW HAMPSHIRE	1,295,642	1,295,642	1,306	992	992	+0
NEW JERSEY	6,466,107	6,466,107	8,747	739	739	+0
NEW MEXICO	194,282	194,282	1,781	109	109	+0
NEW YORK	18,536,132	18,331,095	18,922	979	968	-11
NORTH CAROLINA	1,740,928	1,740,928	7,419	234	234	+0
NORTH DAKOTA	86,112	86,112	690	124	124	+0
OHIO	6,373,463	6,373,463	12,031	529	529	+0
OKLAHOMA	624,012	624,012	3,702	168	168	+0
OREGON	1,252,273	1,252,273	3,209	390	390	+0
PENNSYLVANIA	7,785,484	7,785,484	12,365	629	629	+0
RHODE ISLAND	979,175	979,175	1,033	947	947	+0
SOUTH CAROLINA	871,222	871,222	3,700	235	235	+0
SOUTH DAKOTA	252,545	252,692	730	345	345	+0
TENNESSEE	1,854,601	1,854,601	5,573	332	332	+0
TEXAS	4,410,392	4,392,816	18,069	244	243	-1
UTAH	400,203	400,203	1,686	237	237	+0
VERMONT	445,605	445,605	607	734	734	+0
VIRGINIA	1,969,986	1,969,986	6,755	291	291	+0
WASHINGTON	3,125,975	3,125,975	4,859	643	643	+0
WEST VIRGINIA	1,866,573	1,866,573	2,003	931	931	+0
WISCONSIN	2,464,734	2,271,388	5,553	483	409	-34
WYOMING	159,654	150,991	484	329	311	-18
AMERICAN SAMOA	58,234	58,234	40	1,455	1,455	+0
GUAM	39,328	24,448	275	143	88	-55
MARIANAS GROUP	62,347	62,347	31	2,011	2,011	+0
PUERTO RICO	1,185,302	1,185,302	4,700	252	252	+0
PAC. TR. TERR.	109,931	109,931	174	631	631	+0
VIRGIN ISLANDS	47,344	47,344	116	408	408	+0
U.S. TOTALS	120,800,812	119,898,956	272,644	443	439	-4

FEBRUARY 10, 1981
TABLE 28

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1980 DOLLARS
CATS I, IIA, AND IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	309,747	309,747	+0	0.8875	0.8982	+0.0107
ALASKA	318,056	318,056	+0	0.9113	0.9223	+0.0110
ARIZONA	368,655	279,128	-89,527	1.0562	0.8094	-0.2467
ARKANSAS	223,920	223,920	+0	0.6415	0.6493	+0.0078
CALIFORNIA	3,052,841	2,777,612	-275,229	8.7472	8.0551	-0.6920
COLORADO	428,466	428,466	+0	1.2276	1.2425	+0.0149
CONNECTICUT	369,680	369,680	+0	1.0586	1.0715	+0.0129
DELAWARE	136,970	136,970	+0	0.3924	0.3972	+0.0048
DIST. OF COLUMBIA	8,049	8,049	+0	0.0230	0.0233	+0.0003
FLORIDA	1,781,143	1,781,143	+0	5.1034	5.1653	+0.0619
GEORGIA	570,609	570,609	+0	1.6349	1.6547	+0.0198
HAWAII	259,148	259,148	+0	0.7425	0.7515	+0.0090
IDAHO	208,563	208,563	+0	0.5975	0.6048	+0.0073
ILLINOIS	1,592,211	1,592,211	+0	4.5621	4.6174	+0.0553
INDIANA	526,652	526,652	+0	1.5089	1.5273	+0.0184
IOWA	520,249	520,249	+0	1.4906	1.5087	+0.0181
KANSAS	342,081	342,081	+0	0.9801	0.9920	+0.0119
KENTUCKY	530,879	530,879	+0	1.5211	1.5395	+0.0184
LOUISIANA	439,259	439,259	+0	1.2585	1.2738	+0.0153
MAINE	185,650	185,650	+0	0.5319	0.5383	+0.0064
MARYLAND	721,636	721,636	+0	2.0676	2.0927	+0.0251
MASSACHUSETTS	1,029,097	1,029,097	+0	2.9486	2.9844	+0.0358
MICHIGAN	1,539,976	1,539,976	+0	4.4124	4.4659	+0.0535
MINNESOTA	620,924	620,924	+0	1.7791	1.8007	+0.0216
MISSISSIPPI	396,813	396,813	+0	1.1369	1.1507	+0.0138
MISSOURI	965,935	965,935	+0	2.7676	2.8012	+0.0336
MONTANA	59,286	59,286	+0	0.1698	0.1719	+0.0021
NEBRASKA	188,828	188,828	+0	0.5410	0.5476	+0.0066
NEVADA	162,310	162,310	+0	0.4650	0.4707	+0.0057
NEW HAMPSHIRE	274,729	274,729	+0	0.7871	0.7967	+0.0096
NEW JERSEY	1,942,991	1,942,991	+0	5.5671	5.6347	+0.0676
NEW MEXICO	114,234	114,234	+0	0.3273	0.3312	+0.0039
NEW YORK	3,524,300	3,492,629	-31,671	10.0980	10.1287	+0.0307
NORTH CAROLINA	711,259	711,259	+0	2.0379	2.0626	+0.0247
NORTH DAKOTA	37,668	37,668	+0	0.1079	0.1092	+0.0013
OHIO	1,557,297	1,557,297	+0	4.4620	4.5162	+0.0542
OKLAHOMA	283,098	283,098	+0	0.8111	0.8209	+0.0098
OREGON	293,926	293,926	+0	0.8421	0.8523	+0.0102
PENNSYLVANIA	1,489,517	1,489,517	+0	4.2678	4.3196	+0.0518
RHODE ISLAND	188,193	188,193	+0	0.5392	0.5457	+0.0065
SOUTH CAROLINA	262,679	262,679	+0	0.7526	0.7617	+0.0091
SOUTH DAKOTA	150,188	150,135	-53	0.4303	0.4353	+0.0050
TENNESSEE	633,455	633,455	+0	1.8150	1.8370	+0.0220
TEXAS	1,605,680	1,588,131	-17,549	4.6007	4.6056	+0.0049
UTAH	247,631	247,631	+0	0.7095	0.7181	+0.0086
VERMONT	108,369	108,369	+0	0.3105	0.3142	+0.0037
VIRGINIA	693,293	693,293	+0	1.9864	2.0105	+0.0241
WASHINGTON	908,086	908,086	+0	2.6019	2.6334	+0.0315
WEST VIRGINIA	373,848	373,848	+0	1.0711	1.0841	+0.0130
WISCONSIN	1,000,350	1,000,350	+0	2.8662	2.9010	+0.0348
WYOMING	97,356	92,857	-4,499	0.2789	0.2692	-0.0096
AMERICAN SAMOA	22,674	22,674	+0	0.0649	0.0657	+0.0008
GUAM	19,102	19,102	+0	0.0547	0.0553	+0.0006
MARIANAS GROUP	16,434	16,434	+0	0.0476	0.0482	+0.0006
PUERTO RICO	414,114	414,114	+0	1.1865	1.2009	+0.0144
PAC. TR. TERR.	53,873	53,873	+0	0.1543	0.1562	+0.0019
VIRGIN ISLANDS	18,784	18,784	+0	0.0538	0.0544	+0.0006
U.S. TOTALS	34,900,761	34,482,233	-418,528	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1980 DOLLARS
CATS I, IIA, IIB AND IVB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	532,702	532,702	+0	0.9440	0.9544	+0.0104
ALASKA	423,841	423,841	+0	0.7511	0.7593	+0.0082
ARIZONA	659,708	476,862	-182,846	1.1691	0.8543	-0.3147
ARKANSAS	339,167	339,167	+0	0.6010	0.6076	+0.0066
CALIFORNIA	5,018,376	4,741,632	-276,744	8.8933	8.4955	-0.3977
COLORADO	785,320	785,320	+0	1.3917	1.4070	+0.0153
CONNECTICUT	568,505	568,505	+0	1.0074	1.0185	+0.0111
DELAWARE	227,410	227,410	+0	0.4030	0.4074	+0.0044
DIST. OF COLUMBIA	8,049	8,049	+0	0.0142	0.0144	+0.0002
FLORIDA	3,500,258	3,500,258	+0	6.2030	6.2713	+0.0683
GEORGIA	1,010,348	1,010,348	+0	1.7904	1.8102	+0.0198
HAWAII	557,165	557,165	+0	0.9873	0.9982	+0.0109
IDAHO	301,612	301,612	+0	0.5345	0.5403	+0.0058
ILLINOIS	1,925,714	1,925,714	+0	3.4126	3.4502	+0.0376
INDIANA	735,546	735,546	+0	1.3035	1.3178	+0.0143
IOWA	752,639	752,639	+0	1.3337	1.3484	+0.0147
KANSAS	649,169	649,169	+0	1.1504	1.1631	+0.0127
KENTUCKY	1,028,816	1,028,816	+0	1.8232	1.8433	+0.0201
LOUISIANA	771,110	771,110	+0	1.3665	1.3815	+0.0150
MAINE	344,744	344,744	+0	0.6109	0.6176	+0.0067
MARYLAND	1,093,495	1,093,495	+0	1.9378	1.9592	+0.0214
MASSACHUSETTS	1,663,501	1,663,501	+0	2.9479	2.9804	+0.0325
MICHIGAN	2,223,052	2,223,052	+0	3.9395	3.9830	+0.0435
MINNESOTA	1,012,516	1,012,516	+0	1.7943	1.8141	+0.0198
MISSISSIPPI	628,659	628,659	+0	1.1140	1.1263	+0.0123
MISSOURI	1,638,052	1,638,052	+0	2.9028	2.9348	+0.0320
MONTANA	95,676	95,676	+0	0.1695	0.1714	+0.0019
NEBRASKA	254,763	254,763	+0	0.4514	0.4564	+0.0050
NEVADA	197,052	197,052	+0	0.3492	0.3530	+0.0038
NEW HAMPSHIRE	582,077	582,077	+0	1.0315	1.0429	+0.0114
NEW JERSEY	2,795,881	2,795,881	+0	4.9547	5.0093	+0.0546
NEW MEXICO	157,417	157,417	+0	0.2789	0.2820	+0.0031
NEW YORK	5,197,909	5,076,384	-121,525	9.2115	9.0953	-0.1161
NORTH CAROLINA	1,234,538	1,234,538	+0	2.1877	2.2119	+0.0242
NORTH DAKOTA	51,835	51,835	+0	0.0918	0.0928	+0.0010
OHIO	2,386,889	2,386,889	+0	4.2299	4.2765	+0.0466
OKLAHOMA	420,602	420,602	+0	0.7453	0.7535	+0.0082
OREGON	613,360	613,360	+0	1.0869	1.0989	+0.0120
PENNSYLVANIA	2,074,233	2,074,233	+0	3.6758	3.7163	+0.0405
RHODE ISLAND	301,374	301,374	+0	0.5340	0.5399	+0.0059
SOUTH CAROLINA	559,584	559,584	+0	0.9916	1.0026	+0.0110
SOUTH DAKOTA	176,303	176,250	-53	0.3124	0.3157	+0.0033
TENNESSEE	1,086,603	1,086,603	+0	1.9256	1.9468	+0.0212
TEXAS	3,443,329	3,425,780	-17,549	6.1021	6.1379	+0.0358
UTAH	308,888	308,888	+0	0.5473	0.5534	+0.0061
VERMONT	148,519	148,519	+0	0.2631	0.2661	+0.0030
VIRGINIA	1,163,432	1,163,432	+0	2.0617	2.0845	+0.0228
WASHINGTON	1,606,794	1,606,794	+0	2.8476	2.8788	+0.0314
WEST VIRGINIA	545,738	545,738	+0	0.9671	0.9777	+0.0106
WISCONSIN	1,511,376	1,511,376	+0	2.6783	2.7079	+0.0296
WYOMING	136,783	128,120	-8,663	0.2424	0.2295	-0.0128
AMERICAN SAMOA	48,146	48,146	+0	0.0853	0.0862	+0.0009
GUAM	31,563	23,724	-7,839	0.0559	0.0425	-0.0133
MARIANAS GROUP	42,182	42,182	+0	0.0747	0.0755	+0.0008
PUERTO RICO	750,392	750,392	+0	1.3298	1.3444	+0.0146
PAC. TR. TERR.	73,770	73,770	+0	0.1307	0.1321	+0.0014
VIRGIN ISLANDS	31,905	31,905	+0	0.0565	0.0571	+0.0006
U.S. TOTALS	56,428,387	55,813,168	-615,219	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 30

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR IMPROVEMENT OF TREATMENT PLANTS TO ACHIEVE SECONDARY LEVEL
THOUSANDS OF 1980 DOLLARS
CATEGORY I

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	262,849	262,849	+0	0.8982	0.9112	-0.0130
ALASKA	316,056	316,056	+0	1.0868	1.1026	-0.0157
ARIZONA	368,596	279,069	-89,527	1.2595	0.9674	+0.2920
ARKANSAS	206,081	206,081	+0	0.7042	0.7144	-0.0102
CALIFORNIA	2,911,849	2,636,620	-275,229	9.9505	9.1407	+0.8097
COLORADO	367,913	367,913	+0	1.2572	1.2754	-0.0182
CONNECTICUT	315,328	315,328	+0	1.0775	1.0931	-0.0156
DELAWARE	95,914	95,914	+0	0.3277	0.3325	-0.0047
DIST. OF COLUMBIA	8,049	8,049	+0	0.0274	0.0278	-0.0003
FLORIDA	1,378,567	1,378,567	+0	4.7108	4.7792	-0.0683
GEORGIA	460,992	460,992	+0	1.5753	1.5981	-0.0228
HAWAII	252,171	252,171	+0	0.8617	0.8742	-0.0126
IDAHO	162,878	162,878	+0	0.5565	0.5646	-0.0080
ILLINOIS	621,655	621,655	+0	2.1243	2.1551	-0.0308
INDIANA	276,971	276,971	+0	0.9464	0.9602	-0.0137
IOWA	463,474	463,474	+0	1.5837	1.6067	-0.0229
KANSAS	336,811	336,811	+0	1.1495	1.1662	-0.0166
KENTUCKY	439,789	439,789	+0	1.5028	1.5246	-0.0218
LOUISIANA	431,893	431,893	+0	1.4758	1.4972	-0.0214
MAINE	183,004	183,004	+0	0.6253	0.6344	-0.0090
MARYLAND	334,655	334,655	+0	1.1435	1.1601	-0.0165
MASSACHUSETTS	965,117	965,117	+0	3.2980	3.3458	-0.0478
MICHIGAN	1,421,472	1,421,472	+0	4.8575	4.9279	-0.0704
MINNESOTA	325,902	325,902	+0	1.1136	1.1296	-0.0161
MISSISSIPPI	338,057	338,057	+0	1.1552	1.1719	-0.0167
MISSOURI	964,701	964,701	+0	3.2966	3.3444	-0.0478
MONTANA	47,048	47,048	+0	0.1607	0.1630	-0.0023
NEBRASKA	188,828	188,828	+0	0.6452	0.6546	-0.0093
NEVADA	95,196	95,196	+0	0.3252	0.3300	-0.0047
NEW HAMPSHIRE	261,354	261,354	+0	0.8931	0.9060	-0.0129
NEW JERSEY	1,744,714	1,744,714	+0	5.9621	6.0486	-0.0864
NEW MEXICO	113,352	113,352	+0	0.3873	0.3929	-0.0056
NEW YORK	3,426,085	3,394,414	-31,671	11.7077	11.7678	-0.0600
NORTH CAROLINA	528,288	528,288	+0	1.8052	1.8314	-0.0261
NORTH DAKOTA	37,668	37,668	+0	0.1287	0.1305	-0.0018
OHIO	913,912	913,912	+0	3.1230	3.1683	-0.0453
OKLAHOMA	250,762	250,762	+0	0.8569	0.8693	-0.0124
OREGON	181,483	181,483	+0	0.6201	0.6291	-0.0089
PENNSYLVANIA	1,256,350	1,256,350	+0	4.2932	4.3555	-0.0622
RHODE ISLAND	157,690	157,690	+0	0.5388	0.5466	-0.0078
SOUTH CAROLINA	240,340	240,340	+0	0.8212	0.8332	-0.0119
SOUTH DAKOTA	114,853	114,800	-53	0.3924	0.3979	-0.0055
TENNESSEE	486,106	486,106	+0	1.6611	1.6852	-0.0240
TEXAS	1,450,170	1,432,636	-17,534	4.9555	4.9666	-0.0111
UTAH	132,388	132,388	+0	0.4523	0.4589	-0.0065
VERMONT	95,769	95,769	+0	0.3272	0.3320	-0.0047
VIRGINIA	654,703	654,703	+0	2.2372	2.2697	-0.0324
WASHINGTON	786,427	786,427	+0	2.6874	2.7263	-0.0389
WEST VIRGINIA	362,784	362,784	+0	1.2397	1.2577	-0.0179
WISCONSIN	899,013	899,013	+0	3.0721	3.1167	-0.0445
WYOMING	86,800	82,301	-4,499	0.2966	0.2853	+0.0112
AMERICAN SAMOA	22,674	22,674	+0	0.0774	0.0785	-0.0011
GUAM	19,102	19,102	+0	0.0652	0.0662	-0.0009
MARIANAS GROUP	16,634	16,634	+0	0.0568	0.0576	-0.0008
PUERTO RICO	407,810	407,810	+0	1.3935	1.4137	-0.0202
PAC. TR. TERR.	53,673	53,673	+0	0.1840	0.1867	-0.0026
VIRGIN ISLANDS	18,784	18,784	+0	0.0641	0.0651	-0.0009
U.S. TOTALS	29,263,304	28,844,791	-418,513	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
REPORTED TO ACHIEVE ADVANCED SECONDARY TREATMENT
THOUSANDS OF 1980 DOLLARS
CATEGORY IIA

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	35,238	35,238	+0	0.8376	0.8376	+0.0000
ALASKA	0	0	+0	0.0000	0.0000	+0.0000
ARIZONA	59	59	+0	0.0014	0.0013	+0.0000
ARKANSAS	9,983	9,983	+0	0.2373	0.2372	+0.0000
CALIFORNIA	70,172	70,172	+0	1.6680	1.6680	+0.0000
COLORADO	60,553	60,553	+0	1.4393	1.4393	+0.0000
CONNECTICUT	44,749	44,749	+0	1.0637	1.0637	+0.0000
DELAWARE	41,056	41,056	+0	0.9759	0.9759	+0.0000
DIST. OF COLUMBIA	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	223,859	223,859	+0	5.3212	5.3212	+0.0000
GEORGIA	103,141	103,141	+0	2.4517	2.4517	+0.0000
HAWAII	6,977	6,977	+0	0.1658	0.1658	+0.0000
IDAHO	41,057	41,057	+0	0.9759	0.9759	+0.0000
ILLINOIS	969,107	969,107	+0	23.0363	23.0363	+0.0000
INDIANA	188,807	188,807	+0	4.4880	4.4880	+0.0000
IOWA	56,775	56,775	+0	1.3495	1.3495	+0.0000
KANSAS	5,670	5,670	+0	0.1347	0.1347	+0.0000
KENTUCKY	90,955	90,955	+0	2.1620	2.1620	+0.0000
LOUISIANA	6,168	6,168	+0	0.1466	0.1466	+0.0000
MAINE	166	166	+0	0.0039	0.0039	+0.0000
MARYLAND	48,704	48,704	+0	1.1577	1.1577	+0.0000
MASSACHUSETTS	46,968	46,968	+0	1.1164	1.1164	+0.0000
MICHIGAN	75,638	75,638	+0	1.7979	1.7979	+0.0000
MINNESOTA	262,029	262,029	+0	6.2286	6.2286	+0.0000
MISSISSIPPI	56,840	56,840	+0	1.3511	1.3511	+0.0000
MISSOURI	336	336	+0	0.0079	0.0079	+0.0000
MONTANA	12,238	12,238	+0	0.2909	0.2908	+0.0000
NEBRASKA	0	0	+0	0.0000	0.0000	+0.0000
NEVADA	31,684	31,684	+0	0.7531	0.7531	+0.0000
NEW HAMPSHIRE	4,655	4,655	+0	0.1106	0.1106	+0.0000
NEW JERSEY	93,344	93,344	+0	2.2188	2.2188	+0.0000
NEW MEXICO	306	306	+0	0.0072	0.0072	+0.0000
NEW YORK	70,957	70,957	+0	1.6866	1.6866	+0.0000
NORTH CAROLINA	106,448	106,448	+0	2.5303	2.5303	+0.0000
NORTH DAKOTA	0	0	+0	0.0000	0.0000	+0.0000
OHIO	401,150	401,150	+0	9.5355	9.5356	+0.0001
OKLAHOMA	32,336	32,336	+0	0.7686	0.7686	+0.0000
OREGON	105,649	105,649	+0	2.5113	2.5113	+0.0000
PENNSYLVANIA	199,948	199,948	+0	4.7528	4.7529	+0.0001
RHODE ISLAND	30,503	30,503	+0	0.7250	0.7250	+0.0000
SOUTH CAROLINA	20,916	20,916	+0	0.4971	0.4971	+0.0000
SOUTH DAKOTA	25,183	25,183	+0	0.5986	0.5986	+0.0000
TENNESSEE	131,447	131,447	+0	3.1245	3.1245	+0.0000
TEXAS	97,855	97,840	-15	2.3260	2.3257	-0.0002
UTAH	115,243	115,243	+0	2.7394	2.7394	+0.0000
VERMONT	10,780	10,780	+0	0.2562	0.2562	+0.0000
VIRGINIA	21,458	21,458	+0	0.5100	0.5100	+0.0000
WASHINGTON	121,371	121,371	+0	2.8850	2.8850	+0.0000
WEST VIRGINIA	10,193	10,193	+0	0.2422	0.2422	+0.0000
WISCONSIN	101,337	101,337	+0	2.4088	2.4088	+0.0000
WYOMING	10,556	10,556	+0	0.2509	0.2509	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	6,304	6,304	+0	0.1498	0.1498	+0.0000
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	4,206,868	4,206,853	-15	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 32

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
REPORTED TO ACHIEVE ADVANCED WASTEWATER TREATMENT
THOUSANDS OF 1980 DOLLARS
CATEGORY IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	11,660	11,660	+0	0.8150	0.8150	+0.0000
ALASKA	0	0	+0	0.0000	0.0000	+0.0000
ARIZONA	0	0	+0	0.0000	0.0000	+0.0000
ARKANSAS	7,856	7,856	+0	0.5491	0.5491	+0.0000
CALIFORNIA	70,820	70,820	+0	4.9504	4.9503	+0.0000
COLORADO	0	0	+0	0.0000	0.0000	+0.0000
CONNECTICUT	9,403	9,403	+0	0.6572	0.6572	+0.0000
DELAWARE	0	0	+0	0.0000	0.0000	+0.0000
DIST. OF COLUMBIA	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	178,717	178,717	+0	12.4925	12.4925	+0.0000
GEORGIA	6,476	6,476	+0	0.4526	0.4526	+0.0000
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	4,628	4,628	+0	0.3235	0.3234	+0.0000
ILLINOIS	1,449	1,449	+0	0.1012	0.1012	+0.0000
INDIANA	60,874	60,874	+0	4.2551	4.2551	+0.0000
IOWA	0	0	+0	0.0000	0.0000	+0.0000
KANSAS	0	0	+0	0.0000	0.0000	+0.0000
KENTUCKY	135	135	+0	0.0094	0.0094	+0.0000
LOUISIANA	1,198	1,198	+0	0.0837	0.0837	+0.0000
MAINE	2,480	2,480	+0	0.1733	0.1733	+0.0000
MARYLAND	338,277	338,277	+0	23.6459	23.6459	+0.0000
MASSACHUSETTS	17,012	17,012	+0	1.1891	1.1891	+0.0000
MICHIGAN	42,866	42,866	+0	2.9963	2.9963	+0.0000
MINNESOTA	32,993	32,993	+0	2.3062	2.3062	+0.0000
MISSISSIPPI	1,916	1,916	+0	0.1339	0.1339	+0.0000
MISSOURI	898	898	+0	0.0627	0.0627	+0.0000
MONTANA	0	0	+0	0.0000	0.0000	+0.0000
NEBRASKA	0	0	+0	0.0000	0.0000	+0.0000
NEVADA	35,430	35,430	+0	2.4766	2.4765	+0.0000
NEW HAMPSHIRE	8,720	8,720	+0	0.6095	0.6095	+0.0000
NEW JERSEY	104,933	104,933	+0	7.3349	7.3349	+0.0000
NEW MEXICO	576	576	+0	0.0402	0.0402	+0.0000
NEW YORK	27,258	27,258	+0	1.9053	1.9053	+0.0000
NORTH CAROLINA	76,523	76,523	+0	5.3490	5.3490	+0.0000
NORTH DAKOTA	0	0	+0	0.0000	0.0000	+0.0000
OHIO	242,235	242,235	+0	16.9325	16.9325	+0.0000
OKLAHOMA	0	0	+0	0.0000	0.0000	+0.0000
OREGON	6,796	6,796	+0	0.4749	0.4748	+0.0000
PENNSYLVANIA	33,219	33,219	+0	2.3220	2.3220	+0.0000
RHODE ISLAND	0	0	+0	0.0000	0.0000	+0.0000
SOUTH CAROLINA	1,423	1,423	+0	0.0994	0.0994	+0.0000
SOUTH DAKOTA	10,152	10,152	+0	0.7096	0.7096	+0.0000
TENNESSEE	15,902	15,902	+0	1.1115	1.1115	+0.0000
TEXAS	57,655	57,655	+0	4.0301	4.0301	+0.0000
UTAH	0	0	+0	0.0000	0.0000	+0.0000
VERMONT	1,820	1,820	+0	0.1272	0.1272	+0.0000
VIRGINIA	17,132	17,132	+0	1.1975	1.1975	+0.0000
WASHINGTON	288	288	+0	0.0201	0.0201	+0.0000
WEST VIRGINIA	871	871	+0	0.0608	0.0608	+0.0000
WISCONSIN	0	0	+0	0.0000	0.0000	+0.0000
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	0	0	+0	0.0000	0.0000	+0.0000
PAC, TR, TERR, VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	1,430,589	1,430,589	+0	100.0000	100.0000	+0.0000

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1980 DOLLARS
CATEGORY III A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	78,469	78,469	+0	3.1426	3.1421	-0.0004
ALASKA	24,660	24,660	+0	0.9873	0.9872	+0.0000
ARIZONA	820	820	+0	0.0328	0.0328	+0.0000
ARKANSAS	27,740	27,740	+0	1.1107	1.1105	-0.0001
CALIFORNIA	51,628	51,628	+0	2.0751	2.0748	-0.0002
COLORADO	10,371	10,371	+0	0.4152	0.4151	+0.0000
CONNECTICUT	11,669	11,669	+0	0.4672	0.4671	+0.0000
DELAWARE	3,582	3,582	+0	0.1434	0.1433	+0.0000
DIST. OF COLUMBIA	15,168	15,168	+0	0.6073	0.6072	+0.0000
FLORIDA	89,475	89,475	+0	3.5825	3.5819	-0.0005
GEORGIA	88,392	88,392	+0	3.5375	3.5369	-0.0005
HAWAII	15	15	+0	0.0006	0.0005	+0.0000
IDAHO	16,676	16,676	+0	0.6677	0.6675	-0.0001
ILLINOIS	181,995	181,995	+0	7.2884	7.2841	-0.0011
INDIANA	40,840	41,258	+418	1.6352	1.6516	+0.0164
IOWA	98,295	98,295	+0	3.9357	3.9350	-0.0006
KANSAS	55,639	55,639	+0	2.2277	2.2273	-0.0003
KENTUCKY	87,151	87,151	+0	3.4895	3.4889	-0.0005
LOUISIANA	52,075	52,075	+0	2.0850	2.0847	-0.0002
MAINE	12,854	12,854	+0	0.5146	0.5145	+0.0000
MARYLAND	10,965	10,965	+0	0.4390	0.4389	+0.0000
MASSACHUSETTS	12,593	12,593	+0	0.5042	0.5041	+0.0000
MICHIGAN	60,598	60,598	+0	2.4263	2.4259	-0.0003
MINNESOTA	37,096	37,096	+0	1.4853	1.4850	-0.0002
MISSISSIPPI	110,920	110,920	+0	4.4412	4.4404	-0.0007
MISSOURI	41,751	41,751	+0	1.6716	1.6714	-0.0001
MONTANA	1,565	1,565	+0	0.0626	0.0626	+0.0000
NEBRASKA	956	956	+0	0.0381	0.0381	+0.0000
NEVADA	2,367	2,367	+0	0.0947	0.0947	+0.0000
NEW HAMPSHIRE	8,417	8,417	+0	0.3370	0.3369	+0.0000
NEW JERSEY	106,574	106,574	+0	4.2671	4.2666	-0.0006
NEW MEXICO	0	0	+0	0.0000	0.0000	+0.0000
NEW YORK	97,095	97,095	+0	3.8876	3.8869	-0.0005
NORTH CAROLINA	85,715	85,715	+0	3.4320	3.4314	-0.0005
NORTH DAKOTA	502	502	+0	0.0200	0.0200	+0.0000
OHIO	223,949	223,949	+0	8.9668	8.9653	-0.0014
OKLAHOMA	39,333	39,333	+0	1.5748	1.5746	-0.0001
OREGON	43,549	43,549	+0	1.7436	1.7433	-0.0002
PENNSYLVANIA	15,658	15,658	+0	0.6269	0.6268	+0.0000
RHODE ISLAND	2,416	2,416	+0	0.0967	0.0967	+0.0000
SOUTH CAROLINA	60,851	60,851	+0	2.4368	2.4360	-0.0003
SOUTH DAKOTA	4,340	4,340	+0	0.1737	0.1737	+0.0000
TENNESSEE	134,717	134,717	+0	5.3940	5.3931	-0.0008
TEXAS	175,341	175,341	+0	7.0206	7.0194	-0.0011
UTAH	32,067	32,067	+0	1.2839	1.2837	-0.0001
VERMONT	2,095	2,095	+0	0.0838	0.0838	+0.0000
VIRGINIA	16,083	16,083	+0	0.6439	0.6438	+0.0000
WASHINGTON	97,347	97,347	+0	3.8977	3.8970	-0.0006
WEST VIRGINIA	1,821	1,821	+0	0.0729	0.0728	+0.0000
WISCONSIN	98,722	98,722	+0	3.9528	3.9521	-0.0006
WYOMING	6,065	6,065	+0	0.2436	0.2435	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	724	724	+0	0.0289	0.0289	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	17,517	17,517	+0	0.7013	0.7012	+0.0000
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	139	139	+0	0.0055	0.0055	+0.0000
U.S. TOTALS	2,497,520	2,497,938	+418	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 34

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF MAJOR REHABILITATION AND REPLACEMENT
THOUSANDS OF 1980 DOLLARS
CATEGORY III B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	3,583	3,583	+0	0.0600	0.0600	+0.0000
ALASKA	96	96	+0	0.0016	0.0015	+0.0000
ARIZONA	320	320	+0	0.0053	0.0053	+0.0000
ARKANSAS	2,634	2,634	+0	0.0441	0.0441	+0.0000
CALIFORNIA	170,100	170,100	+0	2.8495	2.8495	+0.0000
COLORADO	109,269	109,269	+0	1.8304	1.8304	+0.0000
CONNECTICUT	14,320	14,320	+0	0.2398	0.2398	+0.0000
DELAWARE	1,359	1,359	+0	0.0227	0.0227	+0.0000
DIST. OF COLUMBIA	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	9	9	+0	0.0001	0.0001	+0.0000
GEORGIA	8,147	8,147	+0	0.1364	0.1364	+0.0000
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	383	383	+0	0.0064	0.0064	+0.0000
ILLINOIS	9,829	9,829	+0	0.1646	0.1646	+0.0000
INDIANA	19,878	19,878	+0	0.3329	0.3329	+0.0000
IOWA	1,158	1,158	+0	0.0193	0.0193	+0.0000
KANSAS	19,765	19,765	+0	0.3311	0.3310	+0.0000
KENTUCKY	8,271	8,271	+0	0.1385	0.1385	+0.0000
LOUISIANA	11,321	11,321	+0	0.1896	0.1896	+0.0000
MAINE	6,636	6,636	+0	0.1111	0.1111	+0.0000
MARYLAND	1,619,582	1,619,582	+0	27.1312	27.1313	+0.0001
MASSACHUSETTS	108,046	108,046	+0	1.8099	1.8099	+0.0000
MICHIGAN	76,863	76,863	+0	1.2876	1.2876	+0.0000
MINNESOTA	28,609	28,609	+0	0.4792	0.4792	+0.0000
MISSISSIPPI	0	0	+0	0.0000	0.0000	+0.0000
MISSOURI	32,069	32,069	+0	0.5372	0.5372	+0.0000
MONTANA	525	525	+0	0.0087	0.0087	+0.0000
NEBRASKA	1,156	1,156	+0	0.0193	0.0193	+0.0000
NEVADA	2,753	2,753	+0	0.0461	0.0461	+0.0000
NEW HAMPSHIRE	5,092	5,092	+0	0.0853	0.0852	+0.0000
NEW JERSEY	1,670	1,670	+0	0.0279	0.0279	+0.0000
NEW MEXICO	274	274	+0	0.0045	0.0045	+0.0000
NEW YORK	3,359,044	3,359,044	+0	56.2707	56.2710	+0.0003
NORTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
NORTH DAKOTA	0	0	+0	0.0000	0.0000	+0.0000
OHIO	11,630	11,630	+0	0.1948	0.1948	+0.0000
OKLAHOMA	24,987	24,987	+0	0.4185	0.4185	+0.0000
OREGON	50,318	50,318	+0	0.8429	0.8429	+0.0000
PENNSYLVANIA	798	798	+0	0.0133	0.0133	+0.0000
RHODE ISLAND	26,258	26,258	+0	0.4398	0.4398	+0.0000
SOUTH CAROLINA	548	548	+0	0.0091	0.0091	+0.0000
SOUTH DAKOTA	1,657	1,657	+0	0.0277	0.0277	+0.0000
TENNESSEE	366	366	+0	0.0061	0.0061	+0.0000
TEXAS	105,316	105,289	-27	1.7642	1.7638	-0.0003
UTAH	0	0	+0	0.0000	0.0000	+0.0000
VERMONT	5,986	5,986	+0	0.1002	0.1002	+0.0000
VIRGINIA	14,063	14,063	+0	0.2355	0.2355	+0.0000
WASHINGTON	74,808	74,808	+0	1.2531	1.2531	+0.0000
WEST VIRGINIA	2,852	2,852	+0	0.0477	0.0477	+0.0000
WISCONSIN	15,872	15,872	+0	0.2658	0.2658	+0.0000
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	11,213	11,213	+0	0.1878	0.1878	+0.0000
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	5,969,431	5,969,404	-27	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 35

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF ELIGIBLE NEW COLLECTORS AND APPURTENANCES
THOUSANDS OF 1980 DOLLARS
CATEGORY IV A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	288,722	288,722	+0	1.5567	1.5646	+0.0078
ALASKA	42,879	42,879	+0	0.2311	0.2323	+0.0011
ARIZONA	131,802	128,733	-3,069	0.7106	0.6976	-0.0130
ARKANSAS	126,472	126,472	+0	0.6819	0.6853	+0.0034
CALIFORNIA	1,287,386	1,287,386	+0	6.9414	6.9767	+0.0352
COLORADO	21,524	21,524	+0	0.1160	0.1166	+0.0005
CONNECTICUT	483,466	483,466	+0	2.6068	2.6200	+0.0132
DELAWARE	33,766	33,766	+0	0.1820	0.1829	+0.0009
DIST. OF COLUMBIA	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,311,497	1,311,497	+0	7.0714	7.1073	+0.0358
GEORGIA	247,779	247,779	+0	1.3359	1.3427	+0.0067
HAWAII	260,987	260,987	+0	1.4072	1.4143	+0.0071
IDAHO	102,950	102,950	+0	0.5550	0.5579	+0.0028
ILLINOIS	179,769	179,769	+0	0.9692	0.9742	+0.0049
INDIANA	304,086	304,086	+0	1.6396	1.6479	+0.0083
IOWA	112,260	112,260	+0	0.6052	0.6083	+0.0030
KANSAS	108,239	108,239	+0	0.5836	0.5865	+0.0029
KENTUCKY	512,999	512,999	+0	2.7660	2.7800	+0.0140
LOUISIANA	314,202	314,202	+0	1.6941	1.7027	+0.0085
MAINE	206,156	206,156	+0	1.1115	1.1172	+0.0056
MARYLAND	226,784	226,784	+0	1.2227	1.2289	+0.0061
MASSACHUSETTS	852,715	852,715	+0	4.5977	4.6210	+0.0233
MICHIGAN	731,682	731,682	+0	3.9462	3.9662	+0.0200
MINNESOTA	154,442	154,442	+0	0.8327	0.8369	+0.0042
MISSISSIPPI	104,549	104,549	+0	0.5637	0.5665	+0.0028
MISSOURI	227,243	227,243	+0	1.2252	1.2314	+0.0062
MONTANA	13,344	13,344	+0	0.0719	0.0723	+0.0003
NEBRASKA	20,205	20,205	+0	0.1089	0.1094	+0.0005
NEVADA	39,910	39,910	+0	0.2151	0.2162	+0.0010
NEW HAMPSHIRE	277,917	277,917	+0	1.4984	1.5061	+0.0076
NEW JERSEY	748,933	748,933	+0	4.0381	4.0586	+0.0204
NEW MEXICO	36,591	36,591	+0	0.1972	0.1982	+0.0009
NEW YORK	2,396,657	2,313,145	-83,512	12.9226	12.5355	-0.3870
NORTH CAROLINA	414,879	414,879	+0	2.2369	2.2483	+0.0113
NORTH DAKOTA	2,304	2,304	+0	0.0124	0.0124	+0.0000
OHIO	714,929	714,929	+0	3.8548	3.8743	+0.0195
OKLAHOMA	139,090	139,090	+0	0.7499	0.7537	+0.0037
OREGON	271,795	271,795	+0	1.4654	1.4729	+0.0074
PENNSYLVANIA	1,295,810	1,295,810	+0	6.9869	7.0223	+0.0354
RHODE ISLAND	280,540	280,540	+0	1.5126	1.5203	+0.0076
SOUTH CAROLINA	250,239	250,239	+0	1.3492	1.3561	+0.0068
SOUTH DAKOTA	3,042	3,042	+0	0.0163	0.0164	+0.0000
TENNESSEE	408,818	408,818	+0	2.2043	2.2154	+0.0111
TEXAS	663,906	663,906	+0	3.5797	3.5978	+0.0181
UTAH	55,060	55,060	+0	0.2968	0.2983	+0.0015
VERMONT	70,607	70,607	+0	0.3806	0.3826	+0.0019
VIRGINIA	334,420	334,420	+0	1.8031	1.8123	+0.0091
WASHINGTON	499,268	499,268	+0	2.6920	2.7056	+0.0136
WEST VIRGINIA	509,010	509,010	+0	2.7445	2.7584	+0.0139
WISCONSIN	257,260	257,260	+0	1.3871	1.3941	+0.0070
WYOMING	891	891	+0	0.0047	0.0048	+0.0000
AMERICAN SAMOA	10,088	10,088	+0	0.0543	0.0546	+0.0002
GUAM	7,041	0	-7,041	0.0379	0.0000	-0.0379
MARIANAS GROUP	20,165	20,165	+0	0.1087	0.1092	+0.0005
PUERTO RICO	377,489	377,489	+0	2.0353	2.0457	+0.0103
PAC. TR. TERR.	36,161	36,161	+0	0.1949	0.1959	+0.0009
VIRGIN ISLANDS	15,300	15,300	+0	0.0824	0.0829	+0.0004
U.S. TOTALS	18,546,225	18,492,603	-43,622	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 34

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1980 DOLLARS
CATEGORY IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	222,955	222,955	+0	1.0356	1.0452	+0.0096
ALASKA	105,785	105,785	+0	0.4913	0.4959	+0.0046
ARIZONA	291,053	197,734	-93,319	1.3519	0.9269	-0.4249
ARKANSAS	115,247	115,247	+0	0.5353	0.5402	+0.0049
CALIFORNIA	1,965,535	1,964,020	-1,515	9.1302	9.2073	+0.0771
COLORADO	356,854	356,854	+0	1.6576	1.6729	+0.0153
CONNECTICUT	199,025	199,025	+0	0.9245	0.9330	+0.0085
DELAWARE	90,440	90,440	+0	0.4201	0.4239	+0.0038
DIST. OF COLUMBIA	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,719,115	1,719,115	+0	7.9856	8.0592	+0.0736
GEORGIA	439,739	439,739	+0	2.0426	2.0614	+0.0188
HAWAII	298,017	298,017	+0	1.3845	1.3971	+0.0126
IDAHO	93,049	93,049	+0	0.4322	0.4362	+0.0040
ILLINOIS	333,503	333,503	+0	1.5491	1.5634	+0.0143
INDIANA	208,894	208,894	+0	0.9703	0.9792	+0.0089
IOWA	232,390	232,390	+0	1.0794	1.0894	+0.0100
KANSAS	307,088	307,088	+0	1.4264	1.4396	+0.0132
KENTUCKY	497,937	497,937	+0	2.3130	2.3343	+0.0213
LOUISIANA	331,851	331,851	+0	1.5415	1.5557	+0.0142
MAINE	159,094	159,094	+0	0.7390	0.7458	+0.0068
MARYLAND	371,859	371,859	+0	1.7273	1.7432	+0.0159
MASSACHUSETTS	634,804	634,804	+0	2.9484	2.9740	+0.0271
MICHIGAN	683,076	683,076	+0	3.1730	3.2022	+0.0292
MINNESOTA	391,592	391,592	+0	1.8190	1.8357	+0.0167
MISSISSIPPI	231,846	231,846	+0	1.0769	1.0868	+0.0099
MISSOURI	672,117	672,117	+0	3.1221	3.1508	+0.0287
MONTANA	36,390	36,390	+0	0.1690	0.1705	+0.0015
NEBRASKA	65,935	65,935	+0	0.3062	0.3090	+0.0028
NEVADA	34,742	34,742	+0	0.1613	0.1628	+0.0015
NEW HAMPSHIRE	307,188	307,188	+0	1.4276	1.4408	+0.0132
NEW JERSEY	852,890	852,890	+0	3.9618	3.9983	+0.0365
NEW MEXICO	43,183	43,183	+0	0.2005	0.2024	+0.0019
NEW YORK	1,673,609	1,583,755	-89,854	7.7742	7.4246	-0.3495
NORTH CAROLINA	523,279	523,279	+0	2.4307	2.4531	+0.0224
NORTH DAKOTA	14,167	14,167	+0	0.0658	0.0664	+0.0006
OHIO	829,592	829,592	+0	3.8536	3.8891	+0.0355
OKLAHOMA	137,504	137,504	+0	0.6387	0.6446	+0.0059
OREGON	319,434	319,434	+0	1.4838	1.4975	+0.0137
PENNSYLVANIA	584,716	584,716	+0	2.7161	2.7411	+0.0250
RHODE ISLAND	113,181	113,181	+0	0.5257	0.5305	+0.0048
SOUTH CAROLINA	296,905	296,905	+0	1.3791	1.3918	+0.0127
SOUTH DAKOTA	26,115	26,115	+0	0.1213	0.1224	+0.0011
TENNESSEE	453,146	453,146	+0	2.1049	2.1243	+0.0194
TEXAS	1,837,649	1,837,649	+0	8.5362	8.6149	+0.0787
UTAH	61,257	61,257	+0	0.2845	0.2871	+0.0026
VERMONT	40,150	40,150	+0	0.1865	0.1882	+0.0017
VIRGINIA	470,139	470,139	+0	2.1838	2.2040	+0.0202
WASHINGTON	698,708	698,708	+0	3.2454	3.2755	+0.0299
WEST VIRGINIA	171,890	171,890	+0	0.7984	0.8058	+0.0074
WISCONSIN	511,026	511,026	+0	2.3738	2.3956	+0.0218
WYOMING	39,427	35,263	-4,164	0.1831	0.1653	-0.0177
AMERICAN SAMOA	25,472	25,472	+0	0.1183	0.1194	+0.0011
GUAM	12,461	4,622	-7,839	0.0578	0.0216	-0.0361
MARIANAS GROUP	25,568	25,568	+0	0.1186	0.1197	+0.0011
PUERTO RICO	336,278	336,278	+0	1.5620	1.5764	+0.0144
PAC. TR. TERR.	19,897	19,897	+0	0.0924	0.0932	+0.0008
VIRGIN ISLANDS	13,121	13,121	+0	0.0609	0.0615	+0.0006
U.S. TOTALS	21,527,626	21,330,935	-196,691	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 37

1980 NEEDS SURVEY

COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CORRECTION OF COMBINED SEWER OVERFLOWS
THOUSANDS OF 1980 DOLLARS
CATEGORY V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE	1980 STATE ESTIMATE	1980 EPA ASSESSMENT	DIFFERENCE
ALABAMA	0	0	+0	0.0000	0.0000	+0.0000
ALASKA	15,535	15,535	+0	0.0415	0.0416	+0.0001
ARIZONA	0	0	+0	0.0000	0.0000	+0.0000
ARKANSAS	0	0	+0	0.0000	0.0000	+0.0000
CALIFORNIA	522,919	522,919	+0	1.3997	1.4068	+0.0071
COLORADO	80,242	80,242	+0	0.2147	0.2158	+0.0011
CONNECTICUT	657,001	657,001	+0	1.7586	1.7676	+0.0090
DELAWARE	233,807	233,807	+0	0.6258	0.6289	+0.0031
DIST. OF COLUMBIA	416,960	416,960	+0	1.1214	1.1271	+0.0057
FLORIDA	6,027	6,027	+0	0.0161	0.0161	+0.0000
GEORGIA	325,182	325,182	+0	0.8706	0.8748	+0.0044
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDAHO	88,041	88,041	+0	0.2356	0.2367	+0.0011
ILLINOIS	2,232,576	2,232,576	+0	5.9759	6.0069	+0.0310
INDIANA	2,926,510	2,926,510	+0	7.8336	7.8740	+0.0404
IOWA	295,539	295,539	+0	0.7910	0.7950	+0.0040
KANSAS	301,652	301,652	+0	0.8079	0.8120	+0.0041
KENTUCKY	822,261	822,261	+0	2.2009	2.2123	+0.0114
LOUISIANA	0	0	+0	0.0000	0.0000	+0.0000
MAINE	953,681	953,681	+0	2.5527	2.5659	+0.0132
MARYLAND	80,624	80,624	+0	0.2158	0.2168	+0.0010
MASSACHUSETTS	2,082,307	2,082,307	+0	5.5737	5.6026	+0.0289
MICHIGAN	1,860,930	1,860,930	+0	4.9811	5.0069	+0.0258
MINNESOTA	320,641	320,641	+0	0.8582	0.8626	+0.0044
MISSISSIPPI	0	0	+0	0.0000	0.0000	+0.0000
MISSOURI	813,810	813,810	+0	2.1783	2.1895	+0.0112
MONTANA	141,549	141,549	+0	0.3788	0.3807	+0.0019
NEBRASKA	85,086	85,086	+0	0.2277	0.2288	+0.0011
NEVADA	0	0	+0	0.0000	0.0000	+0.0000
NEW HAMPSHIRE	422,139	422,139	+0	1.1299	1.1357	+0.0058
NEW JERSEY	2,813,049	2,813,049	+0	7.5297	7.5688	+0.0391
NEW MEXICO	0	0	+0	0.0000	0.0000	+0.0000
NEW YORK	7,485,427	7,485,427	+0	20.0363	20.1405	+0.1042
NORTH CAROLINA	5,796	5,796	+0	0.0155	0.0156	+0.0000
NORTH DAKOTA	31,471	31,471	+0	0.0842	0.0845	+0.0003
OHIO	3,036,066	3,036,066	+0	8.1266	8.1688	+0.0422
OKLAHOMA	0	0	+0	0.0000	0.0000	+0.0000
OREGON	273,251	273,251	+0	0.7314	0.7351	+0.0037
PENNSYLVANIA	4,398,985	4,398,985	+0	11.7748	11.8359	+0.0611
RHODE ISLAND	360,587	360,587	+0	0.9866	0.9916	+0.0050
SOUTH CAROLINA	0	0	+0	0.0000	0.0000	+0.0000
SOUTH DAKOTA	67,203	67,203	+0	0.1798	0.1807	+0.0009
TENNESSEE	224,097	224,097	+0	0.5998	0.6028	+0.0030
TEXAS	22,500	22,500	+0	0.0602	0.0604	+0.0002
UTAH	4,188	4,188	+0	0.0112	0.0111	+0.0000
VERMONT	210,398	210,398	+0	0.5845	0.5875	+0.0030
VIRGINIA	841,988	841,988	+0	1.1830	1.1891	+0.0061
WASHINGTON	847,758	847,758	+0	2.2692	2.2809	+0.0117
WEST VIRGINIA	807,152	807,152	+0	2.1605	2.1716	+0.0111
WISCONSIN	581,526	388,118	-193,408	1.5565	1.0441	-0.5122
WYOMING	15,895	15,895	+0	0.0425	0.0426	+0.0001
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	28,691	28,691	+0	0.0767	0.0770	+0.0003
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	37,359,249	37,165,841	-193,408	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 38

1980 NEEDS SURVEY

EPA BACKLOG ESTIMATES
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1980 DOLLARS

CATEGORIES I THRU V

	TOTAL	I	IIA	IIB	III A	III B	IV A	IV B	V
ALABAMA	545	159	22	7	78	3	225	49	0
ALASKA	324	212	0	0	24	0	38	35	15
ARIZONA	243	120	0	0	0	0	91	30	0
ARKANSAS	269	118	4	4	27	2	92	18	0
CALIFORNIA	3,963	1,565	15	27	51	170	918	692	522
COLORADO	307	84	6	0	10	109	14	1	80
CONNECTICUT	1,568	274	43	9	11	14	405	152	657
DELAWARE	339	41	4	0	3	1	26	29	233
DIST. OF COLUM.	462	8	0	0	15	0	0	0	418
FLORIDA	2,070	608	127	74	89	0	918	246	6
GEORGIA	950	192	59	2	88	8	175	99	325
HAWAII	456	127	6	0	0	0	184	137	0
IDAHO	309	84	22	2	16	0	72	23	88
ILLINOIS	3,957	332	886	0	181	9	156	157	2,232
INDIANA	3,694	185	109	43	41	19	266	101	2,926
IOWA	1,003	370	45	0	98	1	102	89	295
KANSAS	799	186	5	0	55	19	90	140	301
KENTUCKY	1,702	253	40	0	87	8	391	99	822
LOUISIANA	632	173	2	0	52	11	272	120	0
MAINE	1,433	159	0	2	12	6	181	116	953
MARYLAND	2,559	222	26	337	10	1,619	189	71	80
MASSACHUSETTS	4,346	851	40	9	12	108	775	466	2,082
MICHIGAN	4,260	1,118	44	10	60	76	660	428	1,860
MINNESOTA	1,155	241	105	24	37	28	119	278	320
MISSISSIPPI	500	198	35	1	110	0	88	65	0
MISSOURI	2,176	695	0	0	41	32	199	392	813
MONTANA	185	24	0	0	1	0	9	7	141
NEBRASKA	239	127	0	0	0	1	15	10	85
NEVADA	111	34	2	26	2	2	30	11	0
NEW HAMPSHIRE	1,090	189	2	7	6	5	256	198	422
NEW JERSEY	5,138	1,066	71	77	106	1	575	425	2,813
NEW MEXICO	92	54	0	0	0	0	29	7	0
NEW YORK	17,177	2,919	36	16	97	3,359	2,090	1,172	7,485
NORTH CAROLINA	1,012	352	74	55	85	0	331	105	9
NORTH DAKOTA	47	11	0	0	0	0	2	1	31
OHIO	5,102	972	264	138	223	11	582	274	3,036
OKLAHOMA	303	91	9	0	39	24	101	35	0
OREGON	794	74	26	3	43	50	232	90	273
PENNSYLVANIA	6,747	695	149	15	15	0	1,043	228	4,398
RHODE ISLAND	925	153	29	0	2	26	243	100	368
SOUTH CAROLINA	425	126	12	1	60	0	185	38	0
SOUTH DAKOTA	144	46	11	10	4	1	2	2	67
TENNESSEE	1,151	287	103	4	134	0	302	94	226
TEXAS	1,432	481	14	32	175	105	421	170	22
UTAH	275	83	91	0	32	0	40	22	4
VERMONT	414	85	8	1	2	5	65	28	218
VIRGINIA	1,501	464	5	4	16	14	265	289	441
WASHINGTON	1,998	407	6	0	97	74	364	201	847
WEST VIRGINIA	1,729	346	8	0	1	2	867	135	807
WISCONSIN	1,909	730	74	0	98	15	182	419	388
WYOMING	57	32	0	0	6	0	0	1	15
AMERICAN SAMOA	49	14	0	0	0	0	9	25	0
GUAM	20	17	0	0	0	0	0	1	0
MARIANAS GROUP	17	9	0	0	0	0	13	13	0
PUERTO RICO	865	229	3	0	17	11	313	261	28
PAC. TR. TERR.	73	31	0	0	0	0	32	9	0
VIRGIN ISLANDS	36	14	0	0	0	0	13	6	0
U.S. TOTALS	91,106	18,585	2,664	956	2,497	5,969	14,880	8,446	37,169

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

FEBRUARY 10, 1981
TABLE 39

1980 NEEDS SURVEY

BACKLOG COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1980 DOLLARS
CATEGORIES I THRU V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1980 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	545,817	903,496	+357,679	0.5990	0.7535	+0.1544
ALASKA	326,398	507,011	+182,613	0.3560	0.4228	+0.0668
ARIZONA	243,267	606,735	+363,468	0.2670	0.5060	+0.2390
ARKANSAS	269,027	496,013	+226,386	0.2959	0.4136	+0.1177
CALIFORNIA	3,963,101	6,773,865	+2,810,764	4.3499	5.6496	+1.2996
COLORADO	307,366	1,006,726	+699,360	0.3373	0.8396	+0.5022
CONNECTICUT	1,560,149	1,734,961	+166,816	1.7212	1.4470	-0.2741
DELAWARE	339,681	499,924	+160,243	0.3728	0.4169	+0.0441
DIST. OF COLUM.	442,177	442,177	+0	0.4853	0.3687	-0.1165
FLORIDA	2,070,920	4,907,266	+2,836,346	2.2730	4.0928	+1.8197
GEORGIA	950,417	1,679,808	+729,391	1.0431	1.4010	+0.3578
HAWAII	456,322	818,167	+361,845	0.5008	0.6823	+0.1815
IDAHO	309,166	509,662	+200,516	0.3393	0.4250	+0.0857
ILLINOIS	3,957,972	4,529,845	+571,873	4.3443	3.7780	-0.5662
INDIANA	3,696,600	4,027,278	+332,678	4.0552	3.3588	-0.6963
IOWA	1,003,438	1,259,891	+256,453	1.1013	1.0507	-0.0505
KANSAS	799,532	1,134,664	+335,132	0.8775	0.9463	+0.0687
KENTUCKY	1,702,241	2,459,498	+757,257	1.8683	2.0513	+0.1829
LOUISIANA	632,998	1,148,708	+515,710	0.6947	0.9580	+0.2632
MAINE	1,433,557	1,524,071	+90,514	1.5734	1.2711	-0.3023
MARYLAND	2,559,205	3,031,450	+472,245	2.8090	2.5283	-0.2806
MASSACHUSETTS	4,346,168	4,719,162	+372,994	4.7704	3.9359	-0.8344
MICHIGAN	4,260,128	4,953,325	+693,197	4.6759	4.1312	-0.5447
MINNESOTA	1,159,857	1,553,304	+397,447	1.2686	1.2955	+0.0268
MISSISSIPPI	500,737	844,128	+343,391	0.5496	0.7040	+0.1544
MISSOURI	2,176,222	2,752,925	+576,703	2.3886	2.2960	-0.0926
MONTANA	185,350	252,659	+67,309	0.2034	0.2107	+0.0072
NEBRASKA	239,897	362,162	+122,265	0.2633	0.3020	+0.0387
NEVADA	111,457	242,082	+130,625	0.1223	0.2019	+0.0795
NEW HAMPSHIRE	1,090,788	1,295,642	+204,854	1.1972	1.0806	-0.1166
NEW JERSEY	5,138,123	6,466,107	+1,327,984	5.6396	5.3929	-0.2467
NEW MEXICO	92,158	194,282	+102,124	0.1011	0.1620	+0.0608
NEW YORK	17,177,389	18,331,095	+1,153,706	18.8541	15.2887	-3.5653
NORTH CAROLINA	1,012,392	1,740,928	+728,536	1.1112	1.4519	+0.3407
NORTH DAKOTA	67,231	86,112	+18,881	0.0518	0.0718	+0.0199
OHIO	5,102,813	6,373,463	+1,270,650	5.6009	5.3156	-0.2852
OKLAHOMA	303,863	624,012	+320,149	0.3335	0.5204	+0.1869
OREGON	794,489	1,252,273	+457,784	0.8720	1.0446	+0.1723
PENNSYLVANIA	6,747,088	7,705,484	+1,018,396	7.4056	6.4933	-0.9123
RHODE ISLAND	925,247	979,175	+53,928	1.0155	0.8166	-0.1988
SOUTH CAROLINA	425,605	871,222	+445,617	0.4671	0.7266	+0.2594
SOUTH DAKOTA	146,365	252,492	+106,127	0.1606	0.2105	+0.0499
TENNESSEE	1,151,077	1,854,601	+703,524	1.2634	1.5468	+0.2833
TEXAS	1,432,467	4,392,816	+2,960,349	1.5722	3.6637	+2.0914
UTAH	275,327	400,203	+124,876	0.3022	0.3337	+0.0315
VERMONT	414,687	445,605	+30,918	0.4551	0.3716	-0.0835
VIRGINIA	1,501,699	1,969,986	+468,287	1.6482	1.6430	-0.0052
WASHINGTON	1,998,756	3,125,975	+1,127,219	2.1938	2.6071	+0.4133
WEST VIRGINIA	1,729,661	1,866,573	+136,892	1.8985	1.5567	-0.3417
WISCONSIN	1,909,841	2,271,348	+361,507	2.0962	1.8943	-0.2018
WYOMING	57,973	150,991	+93,018	0.0636	0.1259	+0.0623
AMERICAN SAMOA	49,497	58,234	+8,737	0.0543	0.0485	-0.0057
GUAM	20,170	24,448	+4,278	0.0221	0.0203	-0.0017
MARIANAS GROUP	37,033	62,347	+25,314	0.0406	0.0519	+0.0113
PUERTO RICO	865,158	1,185,302	+320,148	0.9496	0.9885	+0.0389
PAC. TR. TERR.	73,701	109,931	+36,230	0.0808	0.0916	+0.0107
VIRGIN ISLANDS	36,540	47,344	+10,804	0.0401	0.0394	-0.0006
U.S. TOTALS	91,106,897	119,898,954	+28,792,057	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 40

1980 NEEDS SURVEY

BACKLOG COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1980 DOLLARS
CATEGORIES I IIA IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1980 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	188,773	309,747	+120,974	0.8523	0.8982	+0.0459
ALASKA	212,586	318,056	+105,470	0.9598	0.9223	-0.0374
ARIZONA	120,036	279,128	+159,092	0.5420	0.8094	+0.2674
ARKANSAS	127,668	223,920	+96,272	0.5763	0.6493	+0.0730
CALIFORNIA	1,698,056	2,777,612	+1,149,556	7.2609	8.0551	+0.7942
COLORADO	90,839	428,466	+337,627	0.4101	1.2425	+0.8324
CONNECTICUT	326,860	369,480	+42,640	1.4757	1.0715	-0.4041
DELAWARE	45,662	136,970	+91,308	0.2061	0.3972	+0.1911
DIST. OF COLUM.	8,049	8,049	+0	0.0363	0.0233	-0.0129
FLORIDA	810,581	1,781,143	+970,562	3.6600	5.1653	+1.5053
GEORGIA	254,438	570,609	+316,171	1.1488	1.6547	+0.5059
HAWAII	134,795	259,148	+124,353	0.6086	0.7515	+0.1429
IDAHO	108,822	208,563	+99,741	0.4913	0.6048	+0.1135
ILLINOIS	1,220,125	1,592,211	+372,086	5.5092	4.6174	-0.8917
INDIANA	339,101	526,652	+187,551	1.5311	1.5273	-0.0037
IOWA	416,578	920,249	+143,671	1.8809	1.5087	-0.3721
KANSAS	191,165	342,081	+150,916	0.8631	0.9920	+0.1289
KENTUCKY	293,905	530,879	+236,974	1.3270	1.5395	+0.2125
LOUISIANA	176,561	439,259	+262,718	0.7971	1.2738	+0.4767
MAINE	162,387	185,650	+23,263	0.7332	0.5383	-0.1948
MARYLAND	586,773	721,636	+134,863	2.6494	2.0927	-0.5566
MASSACHUSETTS	901,777	1,029,097	+127,320	4.0718	2.9844	-1.0873
MICHIGAN	1,172,804	1,539,976	+367,172	5.2955	4.4659	-0.8295
MINNESOTA	378,860	620,924	+250,064	1.6745	1.8007	+0.1262
MISSISSIPPI	235,993	396,813	+160,820	1.0655	1.1507	+0.0852
MISSOURI	696,100	965,935	+269,835	3.1431	2.8012	-0.3418
MONTANA	26,163	59,286	+33,123	0.1091	0.1719	+0.0628
NEBRASKA	127,554	188,828	+61,274	0.5759	0.5476	-0.0282
NEVADA	64,006	162,310	+98,304	0.2890	0.4707	+0.1817
NEW HAMPSHIRE	199,998	274,729	+74,771	0.9028	0.7967	-0.1060
NEW JERSEY	1,215,319	1,942,991	+727,672	5.4875	5.6347	+0.1472
NEW MEXICO	58,699	114,234	+55,535	0.2649	0.3312	+0.0663
NEW YORK	2,972,698	3,492,629	+519,931	13.4227	10.1287	-3.2939
NORTH CAROLINA	485,101	711,259	+226,158	2.1813	2.0626	-0.1186
NORTH DAKOTA	11,722	37,668	+25,946	0.0529	0.1092	+0.0563
OHIO	974,865	1,557,297	+582,432	4.4018	4.5162	+0.1144
OKLAHOMA	101,639	283,098	+181,459	0.4589	0.8209	+0.3620
OREGON	104,367	293,926	+189,559	0.4712	0.8523	+0.3811
PENNSYLVANIA	1,059,810	1,489,517	+429,707	4.7853	4.3196	-0.4656
RHODE ISLAND	103,427	108,193	+4,766	0.0282	0.5457	-0.2824
SOUTH CAROLINA	140,273	262,679	+122,406	0.6333	0.7617	+0.1284
SOUTH DAKOTA	68,808	150,135	+81,731	0.3088	0.4353	+0.1265
TENNESSEE	394,661	633,455	+238,794	1.7820	1.8370	+0.0550
TEXAS	529,065	1,588,131	+1,059,066	2.3889	4.6054	+2.2167
UTAH	175,369	247,631	+72,262	0.7918	0.7181	-0.0736
VERMONT	94,911	108,369	+13,458	0.4285	0.3142	-0.1142
VIRGINIA	474,767	693,293	+218,526	2.1437	2.0105	-0.1331
WASHINGTON	413,260	908,086	+494,826	1.8660	2.6334	+0.7674
WEST VIRGINIA	315,081	373,848	+58,767	1.4226	1.0841	-0.3386
WISCONSIN	605,917	1,000,350	+194,433	3.6371	2.9010	-0.7360
WYOMING	33,671	92,857	+59,186	0.1520	0.2692	+0.1172
AMERICAN SAMOA	14,827	22,674	+7,847	0.0669	0.0657	-0.0011
GUAM	17,765	19,102	+1,337	0.0802	0.0553	-0.0248
MARIANAS GROUP	9,823	16,634	+6,811	0.0443	0.0482	+0.0039
PUERTO RICO	233,219	814,114	+180,895	1.0530	1.2009	+0.1479
PAC. TR. TERR.	31,111	53,873	+22,762	0.1404	0.1562	+0.0158
VIRGIN ISLANDS	16,483	18,784	+2,301	0.0744	0.0544	-0.0199
U.S. TOTALS	22,146,769	34,492,233	+12,345,464	100.0000	100.0000	+0.0000

FEBRUARY 19, 1981
TABLE 41

1980 NEEDS SURVEY

BACKLOG COSTS AND PERCENTAGE OF NATIONAL NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1980 DOLLARS
CATEGORIES I, IIA, IIB & IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1980 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	238,418	532,702	+294,284	0.7793	0.9544	+0.1751
ALASKA	248,172	423,841	+175,669	0.8112	0.7593	-0.0518
ARIZONA	150,727	476,862	+326,135	0.4926	0.8543	+0.3617
ARKANSAS	146,372	339,167	+192,795	0.4784	0.6076	+0.1292
CALIFORNIA	2,300,059	4,741,632	+2,441,573	7.5182	8.4955	+0.9773
COLORADO	92,643	785,320	+692,677	0.3028	1.4070	+1.1042
CONNECTICUT	479,694	568,505	+88,811	1.5679	1.0185	-0.5493
DELAWARE	74,727	227,410	+152,683	0.2442	0.4074	+0.1632
DIST. OF COLUM.	8,049	8,049	+0	0.0263	0.0144	-0.0118
FLORIDA	1,057,288	3,500,258	+2,442,970	3.4559	6.2713	+2.8154
GEORGIA	353,725	1,010,348	+656,623	1.1562	1.8102	+0.6540
HAWAII	272,075	537,165	+265,090	0.8893	0.9982	+0.1089
IDAHO	131,835	301,612	+169,777	0.4309	0.5403	+0.1094
ILLINOIS	1,377,587	1,925,714	+548,127	4.5029	3.4502	-1.0526
INDIANA	440,312	735,546	+295,234	1.4392	1.3178	-0.1213
IOWA	505,777	752,639	+246,862	1.6532	1.3484	-0.3047
KANSAS	331,784	649,169	+317,385	1.0845	1.1631	+0.0786
KENTUCKY	393,483	1,028,816	+635,333	1.2861	1.8433	+0.5572
LOUISIANA	296,033	771,110	+474,277	0.9702	1.3815	+0.4113
MAINE	279,377	344,744	+65,367	0.9132	0.6176	-0.2955
MARYLAND	658,069	1,093,495	+435,426	2.1510	1.9592	-0.1917
MASSACHUSETTS	1,367,992	1,663,501	+295,509	4.4715	2.9804	-1.4910
MICHIGAN	1,601,495	2,223,052	+621,557	5.2348	3.9830	-1.2517
MINNESOTA	669,797	1,012,516	+342,719	2.1239	1.8141	-0.3097
MISSISSIPPI	301,736	628,659	+326,923	0.9862	1.1263	+0.1401
MISSOURI	1,088,830	1,638,052	+549,222	3.5590	2.9348	-0.6241
MONTANA	31,732	95,676	+63,944	0.1037	0.1714	+0.0677
NEBRASKA	137,592	254,763	+117,171	0.4497	0.4564	+0.0067
NEVADA	75,540	197,052	+121,512	0.2469	0.3530	+0.1061
NEW HAMPSHIRE	398,798	582,077	+183,279	1.3035	1.0429	-0.2605
NEW JERSEY	1,641,171	2,795,881	+1,154,710	5.3645	5.0093	-0.3551
NEW MEXICO	62,346	157,417	+95,071	0.2037	0.2820	+0.0783
NEW YORK	4,145,286	9,076,384	+4931,098	13.5497	9.0953	-4.4543
NORTH CAROLINA	589,006	1,234,538	+645,532	1.9252	2.2119	+0.2867
NORTH DAKOTA	13,052	51,835	+38,783	0.0426	0.0928	+0.0502
OHIO	1,249,078	2,386,089	+1,137,011	4.0828	4.2765	+0.1937
OKLAHOMA	137,596	420,602	+283,006	0.4497	0.7535	+0.3038
OREGON	198,575	613,360	+414,785	0.6360	1.0989	+0.4629
PENNSYLVANIA	1,288,120	2,074,233	+786,113	4.2104	3.7163	-0.4940
RHODE ISLAND	283,987	301,374	+17,387	0.9282	0.5399	-0.3882
SOUTH CAROLINA	178,676	559,584	+380,908	0.5840	1.0026	+0.4186
SOUTH DAKOTA	70,720	176,250	+105,530	0.2311	0.3157	+0.0846
TENNESSEE	489,518	1,086,603	+597,085	1.6000	1.9468	+0.3468
TEXAS	707,640	3,425,780	+2,718,140	2.3130	6.1379	+3.8249
UTAH	198,312	308,888	+110,576	0.6482	0.5534	-0.0947
VERMONT	123,176	148,519	+25,343	0.4026	0.2661	-0.1364
VIRGINIA	766,212	1,165,432	+399,220	2.4979	2.0845	-0.4133
WASHINGTON	614,621	1,606,794	+992,173	2.0090	2.8788	+0.8698
WEST VIRGINIA	450,346	545,738	+95,392	1.4720	0.9777	-0.4942
WISCONSIN	1,224,617	1,511,376	+286,759	4.0029	2.7079	-1.2949
WYOMING	35,210	128,120	+92,910	0.1150	0.2295	+0.1145
AMERICAN SAMOA	40,244	48,146	+7,902	0.1315	0.0862	-0.0452
GUAM	19,446	23,724	+4,278	0.0635	0.0425	-0.0209
MARIANAS GROUP	23,521	42,182	+18,661	0.0768	0.0755	-0.0012
PUERTO RICO	494,649	750,392	+255,743	1.6168	1.3444	-0.2723
PAC. TR. TERR.	40,753	73,770	+33,017	0.1332	0.1321	-0.0010
VIRGIN ISLANDS	22,787	31,985	+9,198	0.0742	0.0571	-0.0170
U.S. TOTALS	30,593,103	55,813,168	+25,220,065	100.0000	100.0000	+0.0000

FEBRUARY 10, 1981
TABLE 42

1980 NEEDS SURVEY

BACKLOG PER CAPITA COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU V

	1980 * BACKLOG	1979 POPULATION	BACKLOG PER CAPITA
ALABAMA	545,817	3,769	144
ALASKA	324,398	406	799
ARIZONA	243,267	2,450	99
ARKANSAS	269,627	2,190	123
CALIFORNIA	3,963,101	22,696	174
COLORADO	307,366	2,772	110
CONNECTICUT	1,568,145	3,115	503
DELAWARE	339,681	582	583
DIST. OF COLUM.	442,177	656	674
FLORIDA	2,070,928	8,860	233
GEORGIA	950,417	5,118	185
HAWAII	456,322	915	498
IDAHO	309,146	905	341
ILLINOIS	3,957,972	11,230	352
INDIANA	3,696,666	5,400	684
IOWA	1,003,438	2,903	345
KANSAS	799,532	2,369	337
KENTUCKY	1,702,241	3,527	482
LOUISIANA	632,998	4,026	157
MAINE	1,433,557	1,097	1,306
MARYLAND	2,559,205	4,149	616
MASSACHUSETTS	4,346,168	5,769	753
MICHIGAN	4,260,128	9,208	462
MINNESOTA	1,155,857	4,060	284
MISSISSIPPI	500,737	2,406	208
MISSOURI	2,176,222	4,868	447
MONTANA	185,350	786	235
NEBRASKA	239,897	1,574	152
NEVADA	111,457	782	150
NEW HAMPSHIRE	1,090,788	887	1,229
NEW JERSEY	5,138,123	7,332	700
NEW MEXICO	92,158	1,241	74
NEW YORK	17,177,389	17,649	973
NORTH CAROLINA	1,012,392	5,686	180
NORTH DAKOTA	47,231	657	71
OHIO	5,102,813	10,731	475
OKLAHOMA	303,663	2,892	105
OREGON	794,489	2,527	314
PENNSYLVANIA	6,747,088	11,731	575
RHODE ISLAND	925,247	929	995
SOUTH CAROLINA	425,605	2,932	145
SOUTH DAKOTA	144,365	689	212
TENNESSEE	1,151,077	4,380	262
TEXAS	1,432,467	13,385	107
UTAH	275,327	1,367	201
VERMONT	414,667	493	841
VIRGINIA	1,501,699	5,197	288
WASHINGTON	1,998,784	3,926	509
WEST VIRGINIA	1,729,681	1,878	921
WISCONSIN	1,909,841	4,720	404
WYOMING	57,973	450	128
AMERICAN SAMOA	49,497	31	1,596
GUAM	20,170	114	176
MARIANAS GROUP	37,033	17	2,178
PUERTO RICO	865,154	3,358	257
PAC. TR. TERR.	73,701	111	663
VIRGIN ISLANDS	36,540	96	380
U.S. TOTALS	91,106,897	223,624	407

FEBRUARY 10, 1981
TABLE 43

1980 NEEDS SURVEY

BACKLOG PER CAPITA COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
* THOUSANDS OF 1980 DOLLARS
POPULATIONS IN THOUSANDS
CATS I IIA IIB & IVB

	1980 * BACKLOG	1979 *OPULATION	BACKLOG PER CAPITA
ALABAMA	238,418	3,769	63
ALASKA	248,172	406	611
ARIZONA	150,727	2,450	61
ARKANSAS	146,372	2,180	67
CALIFORNIA	2,300,059	22,696	101
COLORADO	92,643	2,772	33
CONNECTICUT	479,696	3,115	153
DELAWARE	74,727	582	128
DIST. OF COLUM.	8,069	656	12
FLORIDA	1,057,288	8,860	119
GEORGIA	353,725	5,118	69
HAWAII	272,075	915	297
IDAHO	131,835	905	145
ILLINOIS	1,377,587	11,230	122
INDIANA	460,312	5,480	81
IOWA	505,777	2,903	174
KANSAS	331,784	2,369	140
KENTUCKY	393,483	3,527	111
LOUISIANA	296,833	4,026	73
MAINE	279,377	1,097	254
MARYLAND	650,069	4,149	156
MASSACHUSETTS	1,367,992	5,769	237
MICHIGAN	1,601,495	9,208	173
MINNESOTA	649,797	4,060	160
MISSISSIPPI	301,736	2,406	125
MISSOURI	1,088,830	4,868	223
MONTANA	31,732	786	40
NEBRASKA	137,592	1,574	87
NEVADA	75,580	702	107
NEW HAMPSHIRE	398,798	887	449
NEW JERSEY	1,641,171	7,332	223
NEW MEXICO	62,346	1,241	50
NEW YORK	4,145,286	17,649	234
NORTH CAROLINA	589,006	5,606	105
NORTH DAKOTA	13,052	657	19
OHIO	1,249,078	10,731	116
OKLAHOMA	137,596	2,892	47
OREGON	194,575	2,527	76
PENNSYLVANIA	1,288,120	11,731	109
RHODE ISLAND	283,987	929	305
SOUTH CAROLINA	178,676	2,932	60
SOUTH DAKOTA	70,720	689	102
TENNESSEE	489,518	4,380	111
TEXAS	707,640	13,385	52
UTAH	198,312	1,367	145
VERMONT	123,176	493	249
VIRGINIA	764,212	5,197	147
WASHINGTON	614,621	3,926	156
WEST VIRGINIA	450,346	1,878	239
WISCONSIN	1,224,617	4,720	259
WYOMING	35,210	450	78
AMERICAN SAMOA	40,244	31	1,298
GUAM	19,446	114	170
MARIANAS GROUP	23,521	17	1,383
PUERTO RICO	494,649	3,358	147
PAC. TR. TERR.	40,753	111	367
VIRGIN ISLANDS	22,707	96	236
U.S. TOTALS	30,593,103	223,824	136

1980 NEEDS SURVEY

FEBRUARY 10, 1981
TABLE 44

NUMBER OF EPA COST ASSESSMENTS BY CATEGORY

STATE	TOTAL	CAT I	CAT IIA	CAT IIB	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB
ALABAMA	1,062	246	51	2	122	4	295	342
ALASKA	401	203	0	0	5	1	75	117
ARIZONA	540	295	1	0	4	2	96	142
ARKANSAS	1,855	625	110	23	41	5	473	578
CALIFORNIA	3,101	1,098	35	10	69	23	765	1,101
COLORADO	594	187	15	0	34	5	57	296
CONNECTICUT	336	95	8	1	25	8	97	104
DELAWARE	94	18	11	0	4	2	24	35
DIST. OF COLUM.	2	1	0	0	1	0	0	0
FLORIDA	1,272	282	141	33	101	1	328	386
GEORGIA	1,292	271	83	4	197	2	301	434
HAWAII	109	32	1	0	3	0	34	39
IDAHO	530	155	9	3	61	1	111	198
ILLINOIS	1,400	457	155	2	199	15	243	329
INDIANA	1,370	325	110	9	87	6	348	485
IOWA	1,930	701	40	0	185	4	308	692
KANSAS	967	364	3	0	63	9	179	349
KENTUCKY	1,238	297	75	1	131	2	327	405
LOUISIANA	1,093	337	17	2	62	18	264	393
MAINE	652	156	3	7	22	13	227	224
MARYLAND	912	256	47	5	24	14	247	319
MASSACHUSETTS	497	73	16	6	31	15	179	177
MICHIGAN	1,394	317	48	13	94	19	427	476
MINNESOTA	1,348	472	58	44	147	9	237	357
MISSISSIPPI	1,572	442	51	2	157	0	369	551
MISSOURI	1,798	654	5	8	102	22	413	594
MONTANA	238	89	3	0	10	2	33	101
NEBRASKA	741	236	0	0	21	1	146	337
NEVADA	189	60	5	5	6	4	43	66
NEW HAMPSHIRE	492	111	16	36	13	14	151	151
NEW JERSEY	698	172	49	13	93	1	228	162
NEW MEXICO	421	152	3	1	0	4	115	146
NEW YORK	2,696	776	74	65	237	20	822	702
NORTH CAROLINA	1,957	480	116	92	203	0	504	562
NORTH DAKOTA	377	187	0	0	2	0	35	153
OHIO	2,173	457	292	97	190	17	484	676
OKLAHOMA	1,487	509	60	0	39	23	320	536
OREGON	612	115	35	2	69	18	123	250
PENNSYLVANIA	3,673	963	142	22	50	2	1,188	1,306
RHODE ISLAND	92	16	5	0	7	2	34	28
SOUTH CAROLINA	936	202	29	5	165	1	276	258
SOUTH DAKOTA	569	287	8	1	18	7	35	213
TENNESSEE	1,089	208	92	9	152	2	255	291
TEXAS	5,730	1,567	103	20	221	42	1,526	2,231
UTAH	610	155	38	0	30	6	145	242
VERMONT	242	92	14	1	11	10	78	76
VIRGINIA	1,224	450	31	21	46	6	297	373
WASHINGTON	939	228	3	1	57	14	241	395
WEST VIRGINIA	1,496	454	21	4	11	11	472	523
WISCONSIN	1,321	367	69	0	152	39	302	392
WYOMING	217	95	2	0	18	0	14	88
AMERICAN SAMOA	15	5	0	0	0	0	5	5
GUAM	7	3	0	0	2	0	0	2
MARIANAS	10	4	0	0	0	0	3	3
PUERTO RICO	118	26	5	0	21	1	33	32
PAC. TR. TERR.	79	34	0	0	0	0	23	22
VIRGIN ISLANDS	12	3	0	0	1	0	4	4
U.S. TOTALS	57,745	16,642	0	590	3,796	441	14,379	19,429

1980 NEEDS SURVEY

FEBRUARY 10, 1981
TABLE 45

NUMBER OF STATE COST ESTIMATES DIFFERING FROM EPA ASSESSMENTS

STATE	TOTAL	CAT I	CAT IIA	CAT IIB	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB	CAT V	CAT VI
ARIZONA	12	4	0	0	0	0	1	7	0	0
CALIFORNIA	2	1	0	0	0	0	0	1	0	0
NEW YORK	10	3	0	0	0	0	4	3	0	0
SOUTH DAKOTA	1	1	0	0	0	0	0	0	0	0
TEXAS	58	55	2	0	0	1	0	1	0	0
WYOMING	2	1	0	0	0	0	0	1	0	0
GUAM	5	0	0	0	0	0	3	2	0	0
U.S. TOTALS	90	65	2	0	0	1	8	14	0	0

1980 NEEDS SURVEY

FEBRUARY 10, 1981
TABLE 46

PERCENT OF STATE DOLLAR NEEDS
BY BASIS OF COST ESTIMATE

STATE	STATE CERTIFICATION	ANALYSIS COMPLETED	EVALUATION SURVEY COMPLETED	ENGINEER CONSULTANT FIRM EST.	COST OF COMPARABLE CONSTRUCTION	ENGINEER CONSULTANT PRELIM. EST.	EPA COST GUIDANCE	COST EFFECTIVE ANALYSIS	ROUGH ESTIMATE	NONE	TOTAL
ALABAMA	0.0	5.1	0.1	0.0	2.0	20.0	56.2	16.6	0.0	0.0	100.0
ALASKA	0.0	0.0	0.1	0.1	0.0	32.8	58.6	8.5	0.0	0.0	100.0
ARIZONA	0.0	0.1	0.1	0.0	0.3	30.9	52.2	16.6	0.0	0.0	100.0
ARKANSAS	0.0	3.3	0.1	0.1	6.7	14.2	71.9	3.8	0.0	0.0	100.0
CALIFORNIA	0.0	0.1	0.3	0.1	15.8	26.5	47.9	10.0	0.0	0.0	100.0
COLORADO	0.0	0.0	0.0	0.0	0.8	34.5	42.5	23.0	0.0	0.0	100.0
CONNECTICUT	0.0	0.8	0.1	0.4	47.1	29.1	21.7	0.8	0.0	0.0	100.0
DELAWARE	0.0	0.0	1.2	0.0	10.6	43.5	36.3	6.4	0.0	0.0	100.0
DIST. OF COLUM.	0.0	65.3	0.0	0.0	0.8	34.7	0.0	0.0	0.0	0.0	100.0
FLORIDA	0.0	1.1	0.2	0.3	2.3	41.2	44.0	11.0	0.0	0.0	100.0
GEORGIA	0.0	4.7	0.6	0.3	1.6	32.2	33.3	27.3	0.0	0.0	100.0
HAWAII	0.0	0.0	0.0	1.0	3.5	8.4	73.4	13.7	0.0	0.0	100.0
IDAHO	0.0	0.0	0.6	0.0	1.6	36.5	56.4	5.0	0.0	0.0	100.0
ILLINOIS	0.0	2.5	2.3	1.0	2.0	76.7	9.5	6.0	0.0	0.0	100.0
INDIANA	0.0	1.6	1.8	0.2	1.7	56.2	36.3	2.2	0.0	0.0	100.0
IOWA	0.0	4.7	3.7	2.2	15.1	60.3	11.2	2.8	0.0	0.0	100.0
KANSAS	0.0	5.0	0.1	0.0	1.7	37.7	23.1	32.4	0.0	0.0	100.0
KENTUCKY	0.0	4.7	0.3	0.0	0.6	24.5	27.8	42.0	0.0	0.0	100.0
LOUISIANA	0.0	1.6	1.7	0.2	1.0	34.0	40.1	21.5	0.0	0.0	100.0
MAINE	0.0	1.1	0.6	5.3	4.4	34.9	22.3	31.5	0.0	0.0	100.0
MARYLAND	0.0	0.3	0.1	0.0	11.2	58.9	13.8	15.7	0.0	0.0	100.0
MASSACHUSETTS	0.0	0.8	0.0	0.4	4.3	64.2	12.9	17.7	0.0	0.0	100.0
MICHIGAN	0.0	0.9	0.2	1.9	0.0	75.2	15.7	6.1	0.0	0.0	100.0
MINNESOTA	0.0	1.6	0.2	1.1	0.8	15.5	19.9	61.0	0.0	0.0	100.0
MISSISSIPPI	0.0	11.0	0.5	0.0	0.7	49.6	28.2	10.0	0.0	0.0	100.0
MISSOURI	0.0	1.3	0.1	1.9	4.1	70.6	11.2	10.9	0.0	0.0	100.0
MONTANA	0.0	0.2	0.0	0.0	0.0	79.5	20.3	0.0	0.0	0.0	100.0
NEBRASKA	0.0	0.1	0.0	3.8	1.9	62.6	28.9	2.7	0.0	0.0	100.0
NEVADA	0.0	0.5	0.0	0.7	0.0	61.2	34.1	3.6	0.0	0.0	100.0
NEW HAMPSHIRE	0.0	0.5	0.0	0.0	26.2	44.8	14.9	13.6	0.0	0.0	100.0
NEW JERSEY	0.0	1.3	0.9	0.1	6.5	52.5	29.9	8.8	0.0	0.0	100.0
NEW MEXICO	0.0	0.0	0.0	1.8	0.5	38.3	52.1	7.3	0.0	0.0	100.0
NEW YORK	0.0	0.7	8.1	2.0	6.0	40.3	31.2	11.7	0.0	0.0	100.0
NORTH CAROLINA	0.0	4.2	0.1	2.7	2.9	55.5	24.0	10.6	0.0	0.0	100.0
NORTH DAKOTA	0.0	0.0	0.0	10.1	0.0	60.0	29.9	0.0	0.0	0.0	100.0
OHIO	0.0	1.8	0.3	0.8	0.7	47.9	35.1	13.4	0.0	0.0	100.0
OKLAHOMA	0.0	4.7	0.0	0.1	1.4	26.0	53.8	14.1	0.0	0.0	100.0
OREGON	0.0	1.0	5.7	1.6	24.7	36.2	28.0	2.7	0.0	0.0	100.0
PENNSYLVANIA	0.0	0.2	0.0	0.8	1.4	10.6	72.6	6.3	0.0	0.0	100.0
RHODE ISLAND	0.0	0.0	0.0	0.0	23.4	44.6	32.0	0.0	0.0	0.0	100.0
SOUTH CAROLINA	0.0	6.8	0.1	0.2	5.7	44.9	31.5	10.9	0.0	0.0	100.0
SOUTH DAKOTA	0.0	0.9	0.6	5.2	0.1	79.0	12.8	1.4	0.0	0.0	100.0
TENNESSEE	0.0	7.0	0.3	0.0	2.4	48.6	27.1	14.6	0.0	0.0	100.0
TEXAS	0.0	0.8	2.2	2.2	11.1	12.9	64.6	6.2	0.0	0.1	100.0
UTAH	0.0	0.0	2.1	2.9	0.0	36.5	38.9	19.6	0.0	0.0	100.0
VERMONT	0.0	0.5	0.0	3.8	25.5	35.0	29.4	5.8	0.0	0.0	100.0
VIRGINIA	0.0	0.4	0.9	1.7	1.4	49.0	45.1	1.6	0.0	0.0	100.0
WASHINGTON	0.0	0.3	0.2	1.3	5.6	64.3	24.6	3.7	0.0	0.0	100.0
WEST VIRGINIA	0.0	0.0	0.0	1.4	0.8	35.8	62.0	0.0	0.0	0.0	100.0
WISCONSIN	0.0	2.3	0.4	6.3	0.5	62.6	17.8	10.0	0.0	0.0	100.0
WYOMING	0.0	0.8	0.0	0.0	26.5	37.4	25.4	9.9	0.0	0.0	100.0
AMERICAN SAMOA	0.0	0.0	0.0	0.0	0.0	87.7	12.3	0.0	0.0	0.0	100.0
GUAM	0.0	0.0	0.0	0.0	0.0	28.0	0.0	72.0	0.0	0.0	100.0
MARIANAS	0.0	0.0	0.0	0.0	0.0	0.0	32.3	67.7	0.0	0.0	100.0
PUERTO RICO	0.0	0.7	0.0	0.3	1.7	70.4	25.3	1.5	0.0	0.0	100.0
PAC. TR. TERR.	0.0	0.0	0.0	0.0	3.7	16.6	32.2	47.5	0.0	0.0	100.0
VIRGIN ISLANDS	0.0	0.3	0.0	0.0	71.2	5.9	22.6	0.0	0.0	0.0	100.0

1980 NEEDS SURVEY

FEBRUARY 10, 1981
TABLE 47

PERCENT OF NATIONAL DOLLAR NEEDS
BY BASIS OF COST ESTIMATE

BASIS OF ESTIMATE	CAT I	CAT IIA	CAT IIB	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB	TOTAL
STATE CERTIFICATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANALYSIS COMPLETED	0.0	0.0	0.0	46.3	0.8	0.0	0.0	1.5
EVALUATION SURVEY COMPLETED	0.0	0.0	0.0	13.7	16.2	0.0	0.0	1.6
ENGINEER/CONSULTANT FIRM ESTIMATE	1.2	1.5	0.2	0.7	0.2	0.6	1.7	1.1
COST OF PREVIOUS COMPARABLE CONSTRUCTION	3.8	2.2	2.7	0.0	0.0	8.3	10.9	4.1
ENGINEER/CONSULTANT PRELIMINARY ESTIMATE	50.5	66.3	35.4	22.1	79.0	16.0	44.4	43.4
EPA - SUPPLIED COST ESTIMATING PROCEDURES	29.3	13.2	17.4	13.7	0.0	67.7	29.4	34.3
COST EFFECTIVE ANALYSIS	15.3	16.8	44.3	1.4	3.8	5.5	13.3	11.9
ROUGH ESTIMATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(NONE GIVEN)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
U.S. TOTALS	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0

APPENDIX D

SMSA Sketch Profiles (and Inner City Reports*)

1. Akron, (Ohio)
2. Allentown - Bethlehem - Easton, (Pennsylvania & New Jersey)
* 3. Anaheim - Santa Rosa - Garden Grove, (California)
4. Anchorage, (Alaska)
* 5. Atlanta, (Georgia)
* 6. Baltimore, (Maryland)
7. Baton Rouge, (Louisiana)
* 8. Boston, (Massachusetts)
* 8a. Buffalo, (New York)
9. Canton, (Ohio)
10. Charlotte - Gastonia, (North Carolina)
11. Chattanooga, (Tennessee & Georgia)
* 12. Chicago, (Illinois)
13. Cincinnati, (Ohio, Kentucky & Indiana)
14. Cleveland, (Ohio)
15. Columbus, (Ohio)
* 16. Dallas - Ft. Worth, (Texas)
17. Dayton, (Ohio)
18. Daytona Beach, (Florida)
* 19. Denver - Boulder, (Colorado)
* 20. Des Moines, (Iowa)
21. Detroit, (Michigan)
22. Erie, (Pennsylvania)
23. Eugene - Springfield, (Oregon)
24. Ft. Lauderdale - Hollywood, (Florida)
25. Ft. Myers - Cape Coral, (Florida)
26. Fresno, (California)
27. Gary - Hammond - East Chicago, (Indiana)
28. Greensboro - Winston Salem - High Point, (North Carolina)
29. Hartford, (Connecticut)
30. Honolulu, (Hawaii)
* 31. Houston, (Texas)
32. Indianapolis, (Indiana)
33. Jackson, (Mississippi)
34. Jacksonville, (Florida)
* 35. Jersey City, (New Jersey)
36. Kalamazoo - Portage, (Michigan)
37. Kansas City, (Missouri & Kansas)
38. Knoxville, (Tennessee)
39. Lakeland - Winter Haven, (Florida)
40. Lancaster, (Pennsylvania)
41. Las Vegas, (Nevada)
42. Lexington - Fayette, (Kentucky)

43. Long Branch - Asbury Park, (New Jersey)
44. Lorain - Elyria, (Ohio)
* 45. Los Angeles - Long Beach, (California)
46. Louisville, (Kentucky & Indiana)
47. Macon, (Georgia)
* 48. Manchester, (New Hampshire)
49. Melbourne - Titusville - Cocoa, (Florida)
* 50. Memphis, (Tennessee, Arkansas & Mississippi)
51. Miami, (Florida)
* 52. Milwaukee, (Wisconsin)
53. Minneapolis - St. Paul, (Minnesota & Wisconsin)
54. Modesto, (California)
Monterey - (see Salinas)
* 55. Nashville, (Tennessee)
* 56. Nassau - Suffolk, (New York)
57. New Bedford, (Massachusetts)
58. New Haven - West Haven, (Connecticut)
59. New Orleans, (Louisiana)
* 60. New York, (New York & New Jersey)
* 61. Newark, (New Jersey)
62. Norfolk - Virginia Beach - Portsmouth, (Virginia & N. Carolina)
63. Northeast Pennsylvania
Oakland - (See San Francisco)
64. Oklahoma City, (Oklahoma)
65. Omaha, (Nebraska & Iowa)
66. Orlando, (Florida)
67. Oxnard - Simi Valley - Ventura, (California)
Passaic - (See Patterson)
68. Paterson - Clifton - Passaic, (New Jersey)
69. Pensacola, (Florida)
* 70. Philadelphia, (Pennsylvania & New Jersey)
71. Phoenix, (Arizona)
72. Pittsburgh, (Pennsylvania)
73. Portland, (Oregon)
74. Poughkeepsie, (New York)
75. Reno, (Nevada)
76. Richmond, (Virginia)
* 77. Riverside - San Bernardino - Ontario, (California)
78. Rochester, (New York)
79. Sacramento, (California)
80. St. Louis, (Missouri & Illinois)
81. Salem, (Oregon)
82. Salinas - Seaside - Monterey, (California)
83. Salt Lake City - Ogden, (Utah)
84. San Antonio, (Texas)
San Bernardino - (See Riverside)
* 85. San Diego, (California)
* 86. San Francisco - Oakland, (California)
87. San Jose, (California)
88. Santa Cruz, (California)

89. Santa Rosa, (California)
90. Sarasota, (Florida)
Scranton - (See Northeast Pennsylvania)
* 91. Seattle - Everett, (Washington)
92. Sioux Falls, (South Dakota)
* 93. Syracuse, (New York)
94. Tacoma, (Washington)
95. Tampa - St. Petersburg, (Florida)
96. Toledo, (Ohio & Missouri)
97. Trenton, (New Jersey)
98. Tulsa, (Oklahoma)
99. Utica - Rome, (New York)
100. Vallejo - Fairfield - Napa, (California)
Ventura - (See Oxnard)
101. Waco, (Texas)
102. Washington, (D.C, Maryland & Virginia)
103. Wilmington, (Delware, New Jersey & Maryland)
104. Worcester, (Massachusetts)
105. York, (Pennsylvania)
106. Youngstown - Warren, (Pennsylvania)

Notes: 1) Some SMSAs are comprised of several well-known cities, in which case the same SMSA may be referred to twice, as in the case of Oxnard and Ventura.
2) For the SMSAs preceeded by an asterisk, an Inner City Report is also available, in addition to the SMSA Sketch Profile.

In order to obtain copies of any of the above mentioned SMSA Sketch Profiles or Inner City Reports please contact:

Jerre A. Manarolla
Priority & Needs Assessment Branch
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460
(202) 426-4443

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